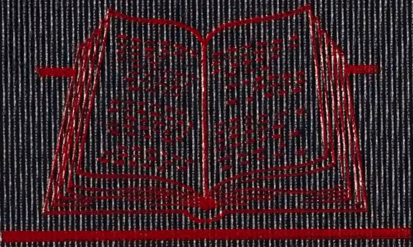
AN AMERICAN PHILOSOPHY OF EDUCATION



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Foundations of an
AMERICAN
PHILOSOPHY OF EDUCATION

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Dean of the College of Arts and Sciences
and of the General College
University of New Mexico

AND ASSOCIATES

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PREFACE

THE present volume is the result of convictions growing out of attempts, over a period of ten years, to teach "a philosophy of American education." It undertakes to lay those foundations which must underlie any serious effort to think critically about current educational problems.

One of the proud marks of our professional achievement in this country has been the multiplication of scientific techniques. No group of people can lay claim to professional status without the mastery of skills demanding strenuous and sustained mental effort; and to this objective American education has devoted itself unstintedly. On the other hand, no professional group long retains its ranking by an all-absorbing pursuit of skills and techniques. The truly professionally-minded man or woman never loses sight of the relation of his specialized function in his social group to life in general; and it is significant that other professions in this country, besides education, are requiring, with increasing emphasis, broad educational foundations for aspirants to their membership.

Colleges of education tend more and more to insist upon thorough grounding in the subject-matter which the teacher shall be called upon to teach. But during the two-year period of a presumably liberal education preceding the period of specialization (assuming at least a four-year college career for every teacher) there is too often a sad lack of comprehensiveness in the materials and the fields of knowledge approached or covered. A little reflection soon convinces the conscientious beginner in any department of the profession that he has little understanding of its broader relationships; he needs both background and insight.

The chapters presented herewith are intended as material to be used not only as a direct approach to the broader meanings of education in American society, but also for filling in some of these lacunae of which the student or the experienced teacher may be more or less conscious, yet has not the time to remedy by himself. In the first place, the science both of man and of the universe in which he lives has changed and expanded greatly in the past twenty-five years. Four chapters by specialists in these fields have touched upon some of the vital points of view now current and their impact upon the educational world. In the next place, we are daily coming to keener consciousness of our membership in social groups and to the conviction that such membership has peculiar significance in the world today. It is important that we review explicitly some of the backgrounds and implications of that point of view and make clear the fact that it ties up with the total heritage of Western civilization. Third, the peculiar ideological conflicts of the present, their significance and possible synthesis for education in America need clarification. These divisions of subject-matter are readily discernible by reference to the table of contents. The editor is convinced that professional education in the field of teaching calls for knowledge of such backgrounds.

Grateful acknowledgment is due to publishers for permission to quote from numerous books, and to my collaborators for unfailing co-operativeness in carrying a difficult joint enterprise to a conclusion.

J. C. K.

University of New Mexico
May 15, 1942

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Introduction

INTRODUCTORY—TO THE YOUNG TEACHER

IT requires no great power of observation to realize that education in America, like life in America, is confused. American education is called dangerous because it encourages social stratification according to an aristocratic English pattern. At the same time its influence is regarded as sinister because it promotes dead-level mediocrity. Its weakness is said by some to lie in its formalism; by others, in its too great freedom. Certain critics complain of its emphasis upon the strictly scientific; others, of its soft sentimentalism. For some it is not sufficiently ''practical''; for others, too practical. It is too strict and too superficial; too individualistic and too socialized; too narrow and too liberal.

All this reflects a prevailing temper. The close of the nineteenth century saw the establishment of science in an impregnable position after prolonged conflict centering about old and rooted authorities. But such a conflict develops attitudes of intransigeance difficult to modify. The persistent defenders in this conflict are pretty completely out of any reckoning in the intellectual life of today, but the attackers have also been guilty of excesses. The engrossment of these shock troops in battering down old formalisms and in consolidating their gains has sometimes resulted in an exaggerated contemporaneity, though many other factors besides conflict have contributed to this result. It has frequently been remarked that the tempo of our life runs toward the *accelerando.* We travel, work, communicate and destroy more rapidly than any previous generation has been able to do. The very act of gregarious living is completely engrossing, to the exclusion of ideas of more general, less concrete nature. But full living includes contemplation and evaluation, and it is a wholesome exercise to make an occasional complete stop for purposes of survey and appraisal.

As civilization goes on, with its inevitable increase in accumulation and consequent intensity of living, periods of synthesis will be required at more frequent intervals. A period of synthesis implies mental digestion. It follows the process of acquisition, of inspection, of tasting (an activity of peculiar fascination if the flavor be a novel one), of mastication. Successful digestion calls for a degree of quiet on the part of the organism; strain and tension are disturbing factors; good humor and relaxation promote it, for digestion is a process of assimilation, incorporation of new elements into an already existing organization. And it calls for organic tolerance. Western civilization, as a cumulative body of ideas and practices, has vastly increased its means of acquiring new materials of thought. The danger is that we shall continue to partake of their abundance, sampling their various, often inharmonious, qualities avidly and indiscriminately, without concern for mental digestion. And mental indigestion not only prevents assimilation; it impairs the work of all previous activities.

No class of people in America today needs this synthesis more than those engaged in teaching. No profession is more comprehensive or complex; and it will remain so as long as life itself remains complex. Therefore, quick solutions can never be forthcoming; education will continuously present new problems, new discouragements, and occasionally, new triumphs. Conceivably, a race having achieved a civilization several millions of years old, might go about its educative processes quite calmly, with little sense of adventure; but, fortunately for our own propensity toward creativeness—great or small as it may be—we are a long way from such a stage.

No class-room teacher can completely escape the formulation of objectives of the process in which he is engaged. But he will be, by all the rules of democracy, the more valuable teacher to the degree that he seeks them consciously and persistently. Such a search is not a task to be completed overnight, nor at the end of one year or two years of teaching. Nor can it be concluded by reading the works of a few educational ''authorities.'' (One of the sure evidences of intellectual immaturity on the part of the teaching profession in the United States is the readiness with which large numbers of its members settle educational arguments by appeal to ''authorities.'') Rather, it is to be the work of long, careful, and arduous thinking.

One of the deadly sins of the teaching profession may come out of what Everett Dean Martin calls ''trotting well in harness.'' Creatures in this category perform a service. They carry heavy burdens; they labor without stint; they are conscientious. But the touch that originates from somewhere above gives the direction, and the reasons for that direction are not asked by the merely subservient follower. Class-room work under such circumstances degenerates into terms merely of techniques, formulae, and materials, mixed, for relief, the observer is sometimes forced to conclude, with nothing more substantial than pleasant sentiments.

But—a point as serious—this guiding touch may come from the opportunist. This way to the right looks easier than the way to the left, and this alone for him decides the issue. While no human being foretells very much with accuracy, we trust most that person who knows well the general nature of the ground already covered and the immediately surrounding conditions, yet whose vision is not limited to the foreground. Educational guidance in the future must be set more and more completely, at all levels, in these terms.

To certain types of minds, the whole project of the formulation of objectives is not only premature, but absurd. Our business, they say, is to mind our business, do the best we can with present data, assemble as much other material relevant to our own situation as we are able, solve our immediate problems—and the future will take care of itself. (Such minds, incidentally, are often quite as impatient of looking back over past human records as they are of the attempt to scan the distant future.) But there are objections to this point of view. Any approach to education must take into account that large sphere known in philosophy as human values. There are certain outcomes of human action, certain types of satisfaction which the great minds of humanity have agreed in designating as the more enduring; others which they agree in calling spurious. These designations are true and those minds are great, of course, to the degree that humanity returns to them; their truth finds verification in the response of many generations of men. It is to be noted, however, that this kind of verification will be found in judgment, not mere identification. Truth has more than a single aspect; one phase may be reached by testing, describing, analyzing, generalizing, classifying, and so on; another is to be attained by judging of effects in the lives of human beings. The first of these general approaches may involve human values not easily discernible when first undertaken. For example, who could have foreseen in the discovery of wireless rays the array of human values associated with radio? But the processes of discernment of ''facts'' and ''values'' remain different; and these values are, inevitably, a primary concern in all education.

Harold Rugg has developed this point admirably in a paragraph dealing with professors of education. ''We need first,'' he says, ''to bring together the intuition of those artistic searchers after essence—the poet, the novelist, the painter, the architect, the dramatist; second, the fact-finding and the law-finding technique of the scientist; third, the predictions of the industrial and business analysts; fourth, the century-long and world-wide perspectives of the historians of civilizations.'' Rugg then indicates another step which he feels to be ''even more imperatively demanded'' of the professor of education: ''He must *himself* become a student of the deep-lying forces of American culture. It is nothing less than the most severe intellectual effort to which we must give ourselves. We are now immersed in a hectic slough of fact-finding technique. . . . By some method or other we must ourselves come to glimpse at least the significance of the chief generalizations concerning economic, political, and cultural life.''*

Such an approach to the problem can well be taken not only by professors in colleges of education, but by all students of education and by all who are active in the profession, from the kindergarten teacher to the research director who works only with those on the graduate level—though, of course, there will be varying degrees of comprehension among these various groups. To be a teacher is to be an educated person. To be an educated person involves, on the one hand, broad acquaintance with the world's intellectual highways; on the other, the ability to integrate and evaluate one's experiences along those highways. We need generalizations; but those of genuine value involve knowledge of backgrounds and acquaintance with the history of ideas and their culminations in our own civilization.

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* Harold Rugg, "Next Steps for Curriculum Makers," *Teachers College Record,* XXX (December, 1928), 195-96.

Scientific
Backgrounds

PART I

SCIENTIFIC BACKGROUNDS

The Physical Universe
Evolution, Man and Education
Man the Social Being
Psychology and Education

I. THE PHYSICAL UNIVERSE

THERE is much of significance to the scholar in modern interpretations of the physical universe. It appears that there is greater comprehension of natural phenomena than at any time in history as evidenced by innumerable discoveries and inventions which furnish aids to health, comfort, and convenience. The stimulus to business resulting from such accomplishments can hardly be estimated, and a new economic science within technology has become necessary. Moreover, the methods which have been responsible for these magnificent successes in science are being examined by men in many diverse fields of endeavor. Under the banners of the new science we are probably witnessing a revolution in beliefs and habits of thought similar to that associated with the Renaissance. Those persons concerned with the process of education, therefore, are finding it advisable to be alert to the tenets of a branch of knowledge which exerts so great an influence upon contemporary life.

Scientific achievement will always arouse popular interest. Man, since the beginning of civilization, has been seriously concerned with possible answers to his questions concerning reality, origins, purpose, and destiny. This continuing inquiry into the first principles of things is the basis of philosophy, and it is to be expected that the material of science should be used freely by men in their philosophical meditations. Without question the new world picture of science has given an impetus to such popular thinking, and some men now look to scientific genius for the solution of many disturbing problems pertaining to ultimates.

HISTORICAL PREFACE

It has been said that "Every science begins as philosophy and ends as art; it arises in hypothesis and flows into achievement." Certainly in the work of the ancient Greek philosophers all of science has a noble ancestry. Aristotle is frequently designated as the "Father of Inductive Science," and his contributions to principles of scientific method are fundamental. Astronomical science still regards with admiration the ability and resourcefulness of such early students of astronomy as Eratosthenes, Hipparchus, and Aristarchus of Samos. Modern physical science has produced no greater genius than Archimedes who astounded his contemporaries with his wizardry. The complete record of the Greek era is impressive, and indicates the surprising scientific ability of the preeminent Greek scholars. Moreover, the ability of those early thinkers to cope with pure abstraction remains challenging. In fact, many centuries were to elapse before any group of scientific thinkers attained equal eminence.

The modern scientific reformation started with the work of Johannes Kepler (1571-1630) and Galileo Galilei (1564-1642). That these two men should have triumphed over their contemporary age of thought which was so completely bound by religious dogma and political turmoil is one of the marvels of scientific history. Kepler showed that his famous three laws which he had postulated for the motion of a planet in its orbit gave planetary positions in agreement with the tables of data obtained by Tycho Brahe in his observation of the planet, Mars. The fact that a scientist would refuse to adopt a theory until it was seen to be consistent with observed data was indeed novel. Likewise, Galileo founded the science of mechanics by promulgating a set of principles with an experimental basis. Both Kepler and Galileo suffered persecution, but the achievements made possible by their work won many adherents to the scientific method which they established.

> This [method] consists in making certain experiments and observations, and then by the use of the scientific imagination, induction, a hypothesis is formulated by means of which future particular facts can be predicted. Further facts are collected to prove or disprove the consequences deduced from the hypothesis; thus the number of facts to be examined becomes manageable, and we acquire rapidly a knowledge of the truth and ultimately are able to establish a general law of nature.[1]

In the same remarkable period of the seventeenth century, Rene Descartes (1596-1650) was achieving fame in a manner which was in decided contrast to that of Kepler and Galileo. Probably a philosopher with a greater imagination never lived, and his theories in regard to space played a conspicuous part in the pre-Newtonian period of science. Descartes postulated that all space was filled with an ethereal fluid and all natural phenomena were results of the action between this fluid and matter. In partial defense of his theory he wrote:

> We say that space is empty when it contains nothing that affects our senses, even though it contains created matter and an extended substance. For we consider ordinarily only those bodies which are near to us in so far as they create in the organs of our senses, impressions so strong that we are able to perceive them.

Descartes was very little interested in experimentation, and such a statement is typical of his novel interpretations. He was more than a philosopher, however, and his contributions to geometry greatly influenced the mathematical scientists who followed him.

Sir Isaac Newton (1642-1727) received much of his inspiration directly from nature of which he was such a shrewd observer. The timely birth of Newton was man's good fortune since science was ready for a genius; and in Newton's own words, ''If I have seen farther than Descartes, it is by standing on the shoulders of giants.'' Newton's studies upon gravitation, perfected as a result of his observation of the motions of the moon, inserted the dynamical element into the work of Kepler and unified much of the work of Galileo. For nearly two centuries and a half Newtonian mechanics has been the important tool of the physical scientist. Moreover, Newton perfected the telescope developed by Galileo, and the modern reflecting telescope is essentially the instrument invented by Newton. Thus as the result of the genius of one man, science appears to have received the impetus for a monotonic progress toward a greater understanding of the physical universe.

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[1] Dayton C. Miller, "The Spirit and Service of Science," *Science,* LXXXIV (October 2, 1936), 298.

Philosophical Aspects

Simultaneously with the work of Newton and the great experimental scientists who followed him, the dominant school of philosophy which flourished was the so-called empirical school. The problem of this school was essentially that of finding the relationship which exists between the mind of man and objective nature. The empiricists placed an emphasis upon the images which come to the mind from sense experience. George Berkeley sought to combat the great wave of materialism sweeping over his age with a doctrine that matter was but a complex of ideas, and David Hume questioned any objective knowledge of substance and causality. These points of view were largely responsible for the effort in the philosophy of Kant (1724-1804) to reconcile empiricism with Newtonian physics. Kant argued that space and time are necessary assumptions to man's understanding of his environment, but he was willing to admit a sort of objective existence to the space and time of Newton. In other words, there would be no understanding without space and time; yet, pure reason alone is inadequate for a comprehension of these concepts.

The theories of these great thinkers were not superficial, and still possess intense fascination. In fact, a varying degree of the philosophy of the empiricists is to be found in philosophical studies from the period of Kant up to the present time. All of the while, science has progressed to new heights while ignoring philosophical reflections upon significance and meaning, and great conquests of natural forces have been apparent in such an achievement as the control and use of electricity. It is not surprising, therefore, that in past years science has frequently accused philosophy and its arguments of being trivial and inconsequential, and distinguished physical scientists upon occasion have spoken with intense disdain of their philosophical contemporaries.

To understand the scientific concepts of the physical universe accepted by men of the twentieth century, it is necessary to appreciate that the two streams of thought represented by pure science and by philosophy are converging. The mutual benefits of such a near union have already been tremendous. Although some men are known as theoretical scientists and others call themselves philosophers, the distinction between the two classifications is frequently so slight as to be virtually unwarranted.

Slowly, physical scientists have arrived at the realization that many of their theories are as abstract as any philosophical principle. For instance, Newton's theory of gravitation requires the notion of action at a distance; no metaphysical doctrine could be more contrary to reality as conceived by man than such an idea. However, upon such a strange foundation was built a mechanics responsible for some of the greatest advances in physical science. Fundamental in the theory of heat is the concept of entropy; the notion of entropy seems to defy realistic human interpretation although the mathematical determination of it, so necessary to many physical problems, may readily be made. Similarly, other elementary principles of physical science may be recognized as pure abstractions. Some men even believe that there has been no discovery of law within the universe; rather, the so-called laws of physical science are man-invented and have been imposed by the scientist in his effort to relate physical phenomena. Eddington has implied such a view when he writes:

> We have found a strange foot-print on the shores of the unknown. We have devised profound theories, one after another, to account for its origin. At last, we have succeeded in reconstructing the creature that made the foot-print. And Lo! it is our own.[2]

For years the physical scientist has been satisfied with a mathematical co-ordination of the data obtained from his observation of natural phenomena. Yet, Bridgman says, ''It is the merest truism, evident at once to unsophisticated observation, that mathematics is a human invention.''

Of course, it begins to seem from actual experience that no mathematical theories or other laws which profess to relate collections of data obtained from a study of natural phenomena are perfect. As soon as investigations are carried far enough, the most satisfactory theories must invariably be revised and perhaps discarded. This fact may be the strongest argument against various subjective points of view.

It is not the purpose of the present discussion to debate the question of the rationality of the universe. However, an assumption of order and then law intelligible to man and underlying the whole scheme of natural phenomena has been at the very foundation of scientific labor. Suffice it to say, there is doubt in the mind of many a scientist at the present time concerning the extent to which such an assumption is valid. There are, nevertheless, strong arguments in support of the hypothesis of rationality.

The pertinent fact to remember in any study of man's concept of the universe is that a human element is involved. Man's glimpse of an objective universe is obtained only through the medium of the senses. Moreover, each experiment is related to an infinitesimal part of the world system, and man is notably frail in his ability to synthesize. It is apparent, furthermore, to even the casual student that great intellectual movements of history have influenced men in their consideration of scientific problems. As man evolves intellectually, his concept of the physical universe must change, and it is exceedingly doubtful whether any ultimate fixation of beliefs should be anticipated. Perhaps the very appreciation of this status of scientific concept indicates that science is entering the last period of its development, the period of art.

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[2] A. S. Eddington, *Space, Time, and Gravitation* (Cambridge: University Press, 1920), p. 201.

The recognized object of physical science at the present time is the development of mechanisms. It is essential that one should attempt to comprehend this fact if he would understand the underlying spirit of such modern doctrines as wave mechanics and relativity; the task is not simple, however. These mechanisms are functional schemes or models which purport to relate a set of natural phenomena. For example, the instructor in organic chemistry shows by a diagram how a large number of atomic particles may cling together to form a complex molecule. This man-made mechanistic device is a great asset to the chemist in explaining and anticipating the results of a chemical reaction, and it seems that there must be considerable correspondence between the principles employed in the models and those actually involved in molecular configurations. Similarly, the student of syntax may draw a diagram in order to comprehend the structure of a sentence.

The outstanding success of the twentieth century has been in the extensive development of that class of mechanisms distinguished as mathematical. Such mathematical structures employ symbols to represent physical entities and relations, and the entire system is co-ordinated and becomes capable of expansion by means of the principles of logic. Achievements as the result of the use of this device have caused some men to make the doubtful declaration that what Descartes dreamed is true: that it is possible to arrive at a complete mechanical interpretation of the world through the use of the terminology of mathematics. Certainly it is true that any precise and modern exposition of the physical universe should be essentially mathematical, but, unfortunately, there appears to be no simple counterpart in language of many mathematical mechanisms.

A great question always present concerns the extent of the existence of a one-to-one correspondence between the elements and relations of the mechanism and the entities and their bonds in objective reality. In other words, is the correspondence so complete that all proper questions can be answered about a part of the physical universe by reference to the corresponding mechanism? To debate the matter intelligently undoubtedly requires more knowledge than man now possesses. First of all, a conference probably should be called between God and man to decide what constitutes a proper question. Moreover, the controversy involves knowledge upon the rationality of the universe, man's ability to perceive, or at least conceive of, the presence of every physical entity, the arbitrariness involved in mathematics and logic, and a host of other problems. The scientist who is a thorough mechanist professes to believe that man is capable of constructing mechanisms which will furnish explanations in every branch of human knowledge. At present there is a distinct tendency away from the mechanistic attitude of a few years ago.

Such considerations have been reflected in pure philosophy in the development and growth of pragmatism. The present movement owes its inception to an article written by C. S. Peirce in 1878. Later he summarized his point of view in the well known maxim which follows:

> In order to ascertain the meaning of an intellectual conception one should consider what practical consequences might conceivably result by necessity from the truth of that conception; and the sum of these consequences will constitute the entire meaning of the conception.

Although the motivation behind the philosophy of William James differed considerably from that of Peirce, yet there appears to have been considerable agreement upon the formulation of pragmatism. Once James asserted that ''we have the right to believe at our own risk any hypothesis that is live enough to tempt our will,'' and again he described ''the true'' as ''the expedient in the way of thinking.''

The work of Peirce and James anticipated the important modern doctrines of experimentalism, or instrumentalism, upheld by John Dewey, and operationalism promulgated so emphatically by P. W. Bridgman. Dewey appears to regard the process of inquiry as experimentation, and he holds that ''experimentation enters into the determination of every warranted proposition.'' Moreover, he insists that the term, truth, be reserved for ''the collection of cases, actual, foreseen and desired, that receive confirmation in their work and consequences.'' It must be admitted that such pragmatism depicts the driving force behind modern science. An important point involved in any discussion of the doctrine, however, is the fact that pragmatism is concerned only with a set of propositions possessing a determinable truth property. Thus the notion is not applicable to such symbolic structures as mathematics and logistic even though they may form the basis for the construction of scientific theories.

Operationalism may be summarized briefly in the thought, ''the concept is synonymous with the corresponding set of operations.'' Of course, as a corollary, a concept is meaningless unless the operations in terms of which it is defined can be carried out. The rigid application of such a principle would undoubtedly force a re-evaluation of a great amount of theory. Also, there is a considerable lack of agreement among theorists upon the precise significance which should be attached to obvious extensions of the doctrine.

In a brief exposition upon the physical universe it seems desirable to consider two major mechanisms, the astronomical macrocosm and the microcosm of the atom. Many similar principles may be applicable to the two studies, but a complete union of them hardly seems feasible at the present time. Moreover, scientists still remember the warning of C. S. Peirce issued years ago, namely:

> It is one thing to infer from the laws of little things how great things that consist of little things will act; but it is quite a different thing to infer from the phenomena presented by great things how single things billions of times smaller will act.

THE UNIVERSE OF ASTRONOMY

The astronomer is tremendously restricted in his study of that which exists beyond his own habitation, the earth. Except for the meteorites he is unable to examine intimately any matter from outer space. All of his conclusions must be derived from a study of radiation such as light, heat, and cosmic rays emanating from distant sources. But such great success has been associated with astronomical studies that the element, helium, was identified upon the sun before it was recognized upon the earth.

In any study of astronomical concepts the student must always adopt the ''operational attitude''; that is, it must be appreciated that all concepts have a meaning distinctly relative to the operations used in defining them. Such notions as distance and direction depend so definitely upon the methods and underlying assumptions employed in determining them that it is a question how much resemblance exists between them and the corresponding concepts commonly employed. A similar attitude seems to be necessary in all of science but it is in astronomy that its importance is most readily recognized.

The science of physics has so completely fascinated the modern mind that many people do not realize that progress in astronomy has likewise been very rapid during the past few decades. It is true, however, that many astronomical studies have been handicapped by the lack of equipment which is very costly. Moreover, the number of scientists engaged in astronomical research is far less than the number occupied with the other physical sciences.

The Pythagoreans of ancient Greece believed that the earth and the planets, several of which they had recognized, revolved around a central point in space. Anaxagoras supplemented the work of Thales to explain many phenomena associated with solar and lunar eclipses. Others of their period likewise made remarkable contributions to astronomical theory. But when Ptolemy proclaimed in the second century, A.D., that the earth was motionless and was the center of the universe, the great astronomical advances of the Greeks were virtually nullified. Of course, the pronouncement of Ptolemy was typical of an age of self-centered people and served as a proper introduction to the "dark ages."

Copernicus (1473-1543) ignored the objection of the church in which he was a priest to promulgate the theory that the earth was not the central object in the universe; rather the earth was revolving around the sun. The modernized Copernican theory, accepted by all astronomers of the present day, states that the solar system consists of the sun and a vast number of smaller bodies in its vicinity which revolve around the sun and attend it in its journey through the greater astronomical universe. The sun possesses an equatorial diameter of 864,100 miles, and the members of its family of surrounding bodies vary in size from mere grains of dust up to the planet, Jupiter, which has an equatorial diameter of 88,640 miles. Only the nine largest bodies which revolve around the sun are known as the planets. The word, planet (wanderer), was used originally to distinguish from the "fixed" stars those bright bodies which move about among the constellations. Not all of the planets may be observed with the naked eye, however, and some of them were observed telescopically only after solving mathematically for the source of a gravitational force which was causing peculiarities in the motion of known planets.

The planets, like the other members of the sun's family, obey Kepler's laws. These laws are as follows:

1. The orbit of each planet is an ellipse with the sun at one of its foci.
2. Every planet revolves so that the line joining it to the sun sweeps over equal areas in equal intervals of time.
3. The squares of the periods of any two planets form the same ratio as the cubes of their mean distances from the sun.

Kepler constructed his laws as a consequence of purely empirical considerations, but since his time they have been demonstrated to be direct results of Newton's law of gravitation. The gravitational principle has seemed entirely ample to explain the motion within the solar system with very few exceptions. The most disturbing exception has been the fact that the major axis of the orbit of Mercury, the closest planet to the sun, is rotating faster than that predicted by the theory of gravitation. Einstein's general theory of relativity won the admiration of astronomers since it seemed to explain this discrepancy along with several other mysteries of science. Einstein's principle discards the concept of force, and places the emphasis upon the geometry of the region surrounding a material body. Thus the region surrounding the sun is supposed to be so strained that the natural path of a body passing through the area is a particular curve instead of a straight line as it would be in empty space. The Einstein theory is not especially difficult for the mathematician who is accustomed to treat abstract concepts symbolically but it is hardly feasible to attempt an accurate verbal description of it.

There are some aspects of planetary motion which have caused considerable speculation. For example, the orbits of the planets are nearly in the same plane and all revolve from west to east. It would be only natural as a result of such observations to assume that at some time all of the bodies of the solar family had been cast off by the central sun. Many hypotheses purporting to explain such an event have been advanced. Important theories have been promulgated by Kant, Laplace, Chamberlin and Moulton, and Jeans and Jeffrys; but it is generally admitted that no one of these is satisfactory in every detail, and most of them seem rather fantastic. Many modern scientists favor the notion that previous to the formation of the planets the sun was encircled by a band of small planetesimal bodies, but beyond that, uncertainty deepens.

It is noteworthy that most of the planets possess satellites. These smaller bodies revolve around the planet in much the same way that the planet itself revolves around the sun. The earth possesses only one satellite, the moon, whereas nine have been identified in the case of Saturn and eleven for Jupiter. The motion of the moon is very complicated. Although it is well enough understood to enable astronomers to predict eclipses and other lunar phenomena quite accurately, yet there are some aspects of the problem which still puzzle experts in celestial mechanics.

The radiation from the sun is the source of virtually all of the energy manifested upon the earth; thus the importance of the sun in any study of life processes can not be minimized. In fact, the energy falling upon one square mile of the earth's surface each day represents power equivalent to approximately five million horsepower. Thus the sun sends us as much energy each minute as mankind utilizes in a year. The sun to the astronomer, however, is a typical star sufficiently close to the earth to be observed in some detail. In astronomical terminology the sun is known as a ''yellow dwarf''; that is, it is burning with a yellow flame, and it possesses a mass and a temperature considerably less than are found in many stars such as, for example, the bright blue stars. Nevertheless, the mass of the sun is a third of a million times greater than that of the earth, and the temperature at the surface of the sun is about 6000° K. The temperature is so great, in fact, that the very atoms which compose it are unstable and chemical combinations of atoms, such as are common upon the earth, are rare. Spectrum analysis reveals that most of the ninety-two elements of chemistry are to be found in the sun and probably all of them are really there.

Typical of the turbulent condition to be found in the sun is the sunspot activity. Sunspots were observed with the naked eye even before the time of the telescope, since great spots 50,000 miles in diameter are not unusual. These spots are great whirling storms in the outer part of the sun, and appear dark by contrast with the rest of the sun's surface. The revolution of charged particles in such an enormous whirlpool causes a great magnetic field. The magnetic condition is frequently of so great an intensity that magnetic storms and fine auroral displays are observed upon the earth which is 93,000,000 miles away. At such times the compass needle performs crazily, and there is interference with telegraphic communication. Above such a disturbance tremendous red "prominences" may rise from the solar atmosphere, the chromosphere, to heights of several hundred thousand miles. A faint blue corona surrounds the sun, and its beautiful forms depend very definitely upon the intensity of the sunspot activity.

A fact of considerable interest is the periodic repetition of sunspot activity. After a study of records dating back to 1610 it has been ascertained that sunspots reach a maximum in number every 11.2 years on the average. The importance of this cycle to the earth should be appreciated since it is known that the mean temperature of the air at the earth's surface is about a degree centigrade lower at the time of sunspot maximum. A constant change of three or four degrees would be ample to cause great climatic changes upon the earth. As it is, A. E. Douglass and his associates profess to have found trends of weather variation recorded in the growth rings of trees corresponding to the sunspot cycle. To the astronomer the greatest interest arises from the fact that the solar radiation is not constant, and the sun apparently is a variable star.

The nearest known star to the sun is Proxima Centauri which is 4.2 light-years away. The inconceivable light-year is the distance traversed by light in one year. Thus if some momentous event should occur upon Proxima Centauri it would require a ray of light traveling at the rate of 186,000 miles per second 4.2 years to bring the news to the earth. A corollary of this statement is the fact that all stellar happenings are seen in the observatories of the earth many years after they have actually taken place.

There are fifteen known stars, including Sirius, within 11 light-years of the sun. It has been suggested that the sun is merely one star in a cluster of stars concentrated in our vicinity. There is considerable statistical evidence for the cluster concept, and many such collections are known to exist in the heavens. If such a local group of stars does exist, its location in relation to the rest of the heavens is probably marked by the belt of bright stars included in the constellations, Canis Major, Orion, Taurus, Cassiopeia, Cygnus, Lyra, and Scorpio.

All of the approximately six thousand visible stars belong to one stupendous system known as the galaxy. The distribution of the stars in the galactic system has been studied by the use of ingenious statistical devices so that astronomers probably possess a rather accurate picture of the system's size and form. Present ideas can be confirmed only after more powerful telescopes bring additional stars under observation. The view now held pictures the great system in the shape of a thin spiral with a major axis of perhaps 100,000 light-years. The smaller cluster of stars which includes the sun appears to be located in one of the great arms of the spiral approximately 30,000 light-years away from the dense center of the system which occurs in the direction of the constellation, Sagittarius. Since the sun is not far north of the principal central plane of the galactic system, observers upon the earth are enabled to see the great condensation in the principal plane which is the plane determined by the Milky Way.

In addition to the stars which frequently appear collected together in great "clouds" or regular clusters, the galactic system contains a variety of nebulae. These galactic nebulae seem to be cloud-like objects of great extent. In truth, there is little doubt that most galactic nebulae are virtually clouds of dust, and the small size of the dust particles in the nebula of Orion has recently been determined. The nebulae designated as ''diffuse nebulae'' are irregular; some of them are faintly luminous, probably from star light, but most of them are dark. Many dark regions in the night sky are undoubtedly caused by intervening dark nebular material, and the handicap to some astronomical studies caused by such dark material is very great. Most so-called ''planetary nebulae'' appearing in the galaxy are ellipsoidal, and are invariably characterized by a star at the center which illuminates the nebular material.

Through the use of the spectroscope, that remarkable instrument that has revolutionized the study of modern astronomy, it is possible to determine the magnitude of the velocity of a luminous body toward the earth or away from it. Some very great velocities have been determined in studies of the galactic system. When all of the data have been synthesized, there is quite definite evidence that the entire system is rotating.

A galaxy so great that a radio message would require 100,000 years to travel the distance of its major axis staggers the imagination; yet the story has not all been told. Hubble demonstrated in 1925 that the great spiral nebulae observed with the telescope are in outer space beyond our own galactic system. Not all of the extra-galactic nebulae are spiral but the great majority of them show considerable regularity of shape. With the largest telescopes hundreds of thousands of these extra-galactic systems can be photographed, and there does not appear to be any diminution of number with increasing distance. With the aid of the 100-inch telescope of the Mount Wilson Observatory a few of the distant nebulae have been resolved into individual stars as contrasted with the nebulae of our own galaxy. In general the extra-galactic systems seem to bear a close resemblance to our own system. Astronomers have succeeded in applying their methods for the evaluation of distance to only a few of the so-called ''island universes''; but the spiral nebula known as Messier 81 is apparently over two million light-years away, and probably most of the extra-galactic nebulae are considerably more remote.

The astronomical universe may be regarded as the region of the galaxies. It may be that the totality of these great galactic systems comprises but one unit in a still greater universe. Such a thought is without foundation now as the largest telescope permits us to see no farther than 500 million light-years, and the idea is actually contrary to modern theories; but it is difficult to predict what new knowledge will soon startle us.

Through spectroscopic means the radial velocities of over a hundred extra-galactic nebulae have been determined. The more distant nebulae all appear to be receding, some with velocities as great as 14,000 miles per second. Such a fact is difficult to explain, and is at the basis of the theory of an ''expanding universe'' accepted by some scientists. It is entirely possible, however, that a new principle of nature remains to be discovered which will explain the apparent recession of distant bodies.

Many mathematical physicists and astronomers have been concerned with the size of the universe. It is to be questioned whether the concept of infinity is actually demonstrable in physical nature. Infinity is a mathematical ideal, and it seems that any operational procedure pertaining to it must invariably fail. Suffice it to say, it has not been demonstrated by science that the universe is infinite. Of course with suitable fundamental assumptions the universe can be found to be finite as a logical consequence. The assumptions of Einstein, which do fit observable nature remarkably well, lead to the conclusion that the approximate size limit of the universe is nearly two billion light years. G. A. Bliss has this to say in regard to such a conclusion:

> Recently when Einstein and de Sitter were sojourning in the United States, the newspapers reported them as discussing still newer theories from which it might be concluded that the universe is finite. This conclusion should never be made. All that we could be justified in saying is that the data which we have concerning the distances and motions of the stars are in closer accord with a theory which is finite than with others which have not this property. The finiteness which can be

demonstrated is a property of the theory and not of the universe.[3]

It may be remarked that this quotation indicates an important danger which can result from modern mechanistic methods.

The problem of the energy present in the universe is a fundamental one. The supply of energy in the sun seems inexhaustible, and there is about as much reason to believe that the sun is getting hotter as to believe that it is becoming cooler. Theories pertaining to sub-atomic energy and the slow contraction of the sun all seem inadequate as an explanation although the former is preferred at the present time. There are stars which appear to be expanding and contracting with a regular periodicity, thus exhibiting the availability of tremendous amounts of energy. Frequently an obscure star will burst forth with magnificent brilliance and then slowly fade to about its original brightness; such a star is called a nova star. In 1572, for example, a star which had been invisible to the naked eye suddenly attained so great a brightness that it was easily visible in daylight for several days; in a few months it had again faded from sight, and since has been quiescent. Novae are observed not only in our own galactic system, usually in the vicinity of the Milky Way, but in distant galaxies as well. In 1936, four novae flashed forth in the galactic system, and two tremendous explosions were seen in distant systems. Of course many novae remain faint and escape detection. It seems highly probable that virtually all stars are novae at some time during their existence. Whence such great quantities of energy? Can energy in the form of radiation escape beyond the imaginary shell of the universe as it is known to man, or is space so constructed that escape is impossible? Such questions remain unanswered. Professor Arthur Haas, former Viennese physicist, has argued that a perpetual interchange of energy between radiation within the universe and the stars would account for the seemingly endless store of energy present in the stars.

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[3] G. A. Bliss, "Mathematical Interpretations of Geometrical and Physical Phenomena," *American Mathematical Monthly,* XL (October, 1933), 478.

In recent years scientific and popular interest has been aroused in the cosmic rays which are certainly related in some manner to the problem of energy. An unknown radiation of a penetrating nature was found as early as 1903 when English physicists were experimenting with the discharge of an electroscope encased in metal. It was strongly suspected at first that the radiation was from the earth's surface. That idea was dismissed when balloonists found the radiation actually increased after a sufficient height above the earth was reached. In 1922, Millikan and his associates became actively interested in the study of the new radiation and soon investigators everywhere were adding their contributions. In recent years A. H. Compton and colleagues have been particularly aggressive in attacking the problem. Scientists have traveled all over the earth looking for variations in the intensity of the radiation; they have climbed tall mountains with their electroscopes; and Millikan recently sent up balloons to an altitude of 17.5 miles. Some of the experiments, especially the balloon ascensions, have been quite spectacular. Rival schools of thought have debated whether the radiation is corpuscular or wave-like in nature. The whole matter has been complicated since it is difficult to distinguish between the primary radiation and its effects. What is measured on earth is undoubtedly the extremely complicated debris of a series of violent collisions involving atmospheric molecules and primary cosmic rays. Recently an especially tenable hypothesis has been advanced that cosmic rays are really streams of protons entering our atmosphere from outer space. The collision of these primary particles with atomic nuclei produces high energy rays of mesotrons which are especially intense at about 16,000 feet above sea level. Both the proton and the mesotron are elementary particles of nature, and will be discussed later in this chapter.

It is now certain that the new radiation is truly cosmic in nature, and originates in interstellar space. Moreover, the penetrating ability of the rays is so great that it is apparent that tremendous energies are involved. Recently it has been estimated that the maximum energy in a single primary cosmic ray particle would be sufficient to lift one's finger off the table. Obviously science is now concerned with an almost incredible source of energy. The role which the cosmic rays play upon the great stage of the physical universe is uncertain. It may be that the rays are remnants of a dying universe, or perhaps they are the building blocks from which nature is continually being rebuilt.

The problem of energy within the universe is related to the structure of matter. The study of matter leads to a consideration of molecules which in turn are relatively stable combinations of atomic particles. Thus a brief study of the miniature universe of the atom will be of interest to us now.

The Atom

The belief that matter is not infinitely divisible is not a modern concept. As early as the fifth century, B. C., various men advanced the view that matter ultimately must be corpuscular in nature. However, it has only been a century and a half since the first rudimentary concepts of atomic chemistry were developed. The atom itself became firmly established in physical science as a result of the researches of Dalton and Avagadro in the early part of the nineteenth century. Studies upon the chemical differences of atoms were stimulated by the discovery made in 1869 by Mendeleeff of the remarkable periodic table of the elements. This means of tabulating the elements not only provided a classification for those elements then recognized but left numerous vacancies for the "missing elements," thus encouraging the discovery of the ninety-two elementary substances accepted by chemistry. All of the ninety-two elements occur in nature with the possible exception of element 61 which has recently been produced artificially.

One of the most successful theories developed during the nineteenth century was the kinetic theory of gases. In the theoretical justification of this theory it was necessary to imagine the atom as a smooth, hard sphere, with perfect elasticity. The atom as thus conceived was accepted by physical science as the true ultimate of matter up to the very opening of the twentieth century.

The present century opened in a most auspicious manner. As early as 1878 William Crookes of London had been interested in perfecting the vacuum tubes of the German, Geissler. Into the ends of a tube which was highly evacuated, electrodes were fused; and when the tube was inserted into an electric circuit, a beautiful florescent display resulted. Crookes ascertained that the ray streaming between the two electrodes was made of material particles which must be negatively charged in view of the effect upon the ray of the near approach of a magnet. In 1897, then, Sir J. J. Thomson conceived of an experiment for the determination of the mass of the particles in the ray of the Crookes tube. Imagine the consternation of scientists when it was found that the corpuscles in the ray were so small that it would require approximately eighteen hundred of them to equal the mass of the hydrogen atom, the lightest atom known. Thus a new elementary particle was born to science, the negatively charged electron. The dramatic discovery of the electron meant a new awakening of physical science which has been reflected in nearly every phase of human life. It is difficult to appreciate what changes have been caused by the great number of electronic devices now in use.

In Germany, Roentgen likewise was experimenting with the Crookes tube. He discovered that whenever a surface, preferably a metallic one, was bombarded with the electrons of the Crookes ray, the result was an emanation of very great penetrating ability. Hence, the now well-known X ray was discovered. The X ray is not composed of material particles; rather it is made up of electromagnetic pulses or waves similar to light and radio rays.

Almost simultaneously in Paris, Becquerel made the significant discovery of radioactivity. Sir Ernest Rutherford proposed in 1904 that a radioactive element is one which is actually disintegrating, and his ideas advanced at that time have formed the basis for modern atomic physics. Now it is known that over two-thirds of the elements, chiefly those possessing the heavy atoms, are radioactive. During the disintegration powerful emanations are given off, and these have been resolved into three types of radiation known as alpha, beta, and gamma rays. The alpha ray is composed of positively charged particles each of which is four times the mass of the hydrogen atom; the beta ray is a stream of electrons similar, therefore, to the ray in the Crookes tube; and the gamma ray is non-corpuscular like the X ray.

In the study of the bombardment of thin metallic films by the heavy alpha-ray particles, it was soon determined that each atom of the film must be made up of a minute nucleus surrounded by electrons relatively far apart. In fact, alpha particles could frequently be shot through a thin piece of metallic foil without encountering any of the dense nuclei of the many atoms through which the particles passed. If, however, an alpha particle should encounter an atomic nucleus the particle was repelled. This fact not only indicated that the nucleus of an atom is positively charged, but it was observed that the magnitude of the repelling charge depended upon the nature of the metallic element used in the thin film. In truth, the repelling charge was proportional to the ordinal number assigned to the element in the periodic chart of Mendeleeff. Thus every element possessed a positive nuclear charge depending upon its location in Mendeleeff's table. From necessity there soon arose the concept of another elementary particle, the positive proton, the existence of which has been demonstrated experimentally. The proton is much heavier than the electron, and contributes the greater part of the mass of the hydrogen atom. Moreover, its positive charge is exactly sufficient to neutralize the negative charge of one electron.

As a culmination of these studies, Rutherford introduced his pictorial model of the atom in 1911, and his ideas appeared to be in remarkable agreement with experimental findings. The "Rutherford atom" (sometimes known as the Rutherford-Bohr atom), is still the conventional model, even though it is not entirely satisfactory at the present time, and it is familiar to most elementary students of physical science. In this original atomic structure the nucleus was depicted as a closely knit configuration of protons and electrons, the protons exceeding the electrons by a number equal to the nuclear charge. Revolving around the nucleus of a neutral atom were electrons of a sufficient number to neutralize the nuclear charge. Thus each atom, according to such a theory, is a miniature solar system.

Instead of referring to the orbits of the electrons, quantum theory terminology, employed so successfully by Niels Bohr, makes use of the idea of energy levels. For every quantum, or unit amount, of energy that is added to an atom, an electron is transferred to the level below. The normal atom is in its lowest energy state and cannot, therefore, emit energy in the form of light. Such an atomic theory has been extremely useful in the development of many parts of physical chemistry.

Atoms of a different nuclear composition might appear to be fundamentally different. Yet it is a curious fact that the chemical behavior distinguishing atoms of various sorts seems to be determined almost entirely by the number and arrangement of their outer electrons. It is now well known that it is possible to have neutral atoms of a different nuclear composition but with the same configuration of outer electrons; in that case, the atoms are not readily distinguishable by chemical procedures. Such substances are known as isotopes, and must be classified as the same element in order to satisfy the periodic classification of Mendeleeff. The study of isotopes and related matters has recently received wide publicity in view of the interesting experiments upon "heavy water." It is generally accepted at the present time that many, if not most, of the elements refined by chemical processes are in reality made up of several isotopes.

It follows, therefore, that an actual transmutation takes place in an element only when the nuclear charge of its atoms is changed in magnitude. Radioactivity presents a natural example of transmutation; for instance, an atom of radium which possesses a nuclear charge of 88 units becomes an atom of radon of nuclear charge 86 units after the emission of an alpha particle.

Although the radioactive disintegration of an atom is spontaneous, it is unpredictable as to the moment when any individual atom will make the alteration. However, the matter has been studied statistically in the case of several radioactive substances, and a very accurate estimate has been made of the time which elapses before half of the atoms in a given amount of material will have changed. As an interesting application of this knowledge, geologists have succeeded in estimating the age of rock containing radioactive material by determining the quantity of helium present, since alpha particles which are given off during radioactivity become atoms of helium when neutralized.

In an attempt to study the potency of alpha rays, Chadwick directed them a few years ago against atoms of metallic beryllium. He was surprised to find that the metal emitted neutral particles each of which possessed a mass approximately equal to that of a proton. The new particle was called a neutron, and its importance has been confirmed by later experiments. Although the neutron is regarded as an elementary particle, yet it seems to appear in many experiments as if it were a proton closely tied up with a neutralizing electron. At present the conventional point of view is that the atomic model of Rutherford should be revised so that the nucleus will contain only neutrons and protons whereas all electrons are to be found within the imaginary shell surrounding the nucleus.

Later, some experiments which attracted much attention were conducted by C. D. Anderson, youthful Nobel prize winner of 1936. He discovered the positron, a positive electron. While studying the passage of the mysterious cosmic radiation through lead, Anderson observed that two electron tracks frequently diverged from the same point. It was evident that these tracks were caused by particles of opposite charge, the particle of the positive charge being verified as a new subatomic entity. The positron possesses a mass approximately equal to that of the electron, and its positive charge is exactly neutralized by the charge of the electron. Positrons are likewise produced in many cases of induced radioactivity but have only recently been observed due to their extremely short life. The hypothesis which appears to be in favor at the present time is that positrons are not elements in the atomic structure, rather they are actually created, perhaps secondarily, when atoms are placed in the path of rays of sufficient energy.

As already mentioned, the study of cosmic rays has indicated the essential nature of the particle of matter called the mesotron. The mesotron appears to have a mass intermediate between the electron and the proton, and is very unstable. In fact, it seems to have a mean lifetime of only 2.8 millionths of a second. Cloud chamber photographs have recently shown that this particle disintegrates into a positron with half the energy, and the rest of the energy presumably goes into a still newer entity designated as a neutrino. Theoretical considerations suggest that mesotrons may be intimately related to the mysterious and tremendous forces involved in the nuclear structure of the atom, and even more active studies in an attempt to understand these forces are being undertaken.

Without question, the frontier in modern physical science which has excited the imagination of the layman and the scientist alike is that to be found in nuclear physics. The harnessing of the tremendous energy involved within the nucleus of the atom is a common topic of discussion; men both anticipate and fear the day when such energies are available.

From the very first of the present era, physicists have been intrigued by the possibility of artificially disintegrating the atomic nucleus. In fact, any change which can be made in the nuclear constitution brings man closer to the dreams of the alchemist who would make the precious metals from those which are base. Some of the most ambitious of modern experiments have to do with nuclear transformation. The gigantic electrical machines constructed for the purpose furnish excellent material for feature writers in popular magazines. The invention of the cyclotron brought a Nobel prize to Ernest O.

Lawrence, young California physicist. The cyclotrons now in use bombard nuclei with atomic projectiles having energies of about ten million electron-volts. A huge cyclotron now under construction in Berkeley, California, however, will multiply the energies produced in previous machines by ten. Another device for producing powerful radiation is called the betatron by its inventor, D. W. Kerst of the University of Illinois, and the General Electric Company is manufacturing one of the machines which may exceed the huge cyclotron in effectiveness.

Already notable success has attended the bombardment of atomic nuclei by rays of neutrons of high energy. Helium has been made from lithium, magnesium has been produced from sodium, and mercury has been turned into gold. Of course, such developments are still in the laboratory stage. An equally interesting use of ''atom smashing machines'' is foreseen in the treatment of neoplastic disease. Beams of neutrons shot into cancerous tissue seem to produce considerable shrinkage of the tumor.

Many of the studies and experiments concerned with the laws of the atom appear to require an ultimate identification of mass and energy. Such a principle first appeared as an immediate consequence of the hypotheses formulated in the theory of relativity. At present the experimental evidence in favor of the theory is very great, and the explicit law of Einstein is accepted as basic in physical studies.

During the past few years, physical science has been seriously concerned with the doctrine of a possible dualism of the wave and corpuscular aspects of matter. At times, for instance, the evidence seems undeniable that an electron must be a material particle, whereas at other times it is difficult to understand how it can be of a material nature. Some union of the two concepts would be a natural expedient. The situation was recently explained briefly and simply by Professor Allan Ferguson in the following words:

> The analysis, which is essentially mathematical, has introduced the notion of probability into our estimates, say, of

position. We describe the wave which accompanies a corpuscle by means of an equation which will contain an expression for the amplitude of the wave; and the amplitude at any point gives us a measure of the probability of finding the corpuscle at that point; if the amplitude vanishes anywhere the probability of finding the corpuscle at that point vanishes also. The concept of an electron as a definite entity at a definite point in space is replaced by the probability pattern which, very dense in a certain locality, rapidly thins as we move away from that locality. In fact, if we fix our attention on the densest part of a given pattern, the probability of finding an electron at a distance of 10^{-13} cm. therefrom becomes vanishingly small, and most of us may be content to use the concept of an electron almost in our accustomed manner, realizing that it has become a little fuzzy at the edges.[4]

Thus the very nature of the electron seems to make it sufficiently elusive that exact prediction is impossible when applied to individual electrons. Moreover, precise knowledge upon both the position and the velocity of an electron at any moment is not possible. Heisenberg called attention to this situation in his celebrated ''Uncertainty Principle,'' and there has been much consternation on the part of some scientists and philosophers. It appears to some that a doctrine of strict determinism cannot possess significance when applied to a sub-atomic entity such as an electron, but many doubt the wisdom of such a conclusion. Several decades ago C. S. Peirce warned science of the possible revision of causality principles when he wrote, ''The first metaphysical axiom to go to the tomb of extinct creeds must be the proposition that every event in the universe is precisely determined by cause according to inviolable law.'' Just what effect the abolition of strict causality principles would have upon the working assumptions of experimental science is not known. The uncertainty involved in the consideration of a single human life is very great, but large insurance companies insure great numbers of men with complete confidence. Perhaps science in the future will merely require a better knowledge of the significance of the laws of probability.

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[4] Allan Ferguson, "Trends in Modern Physics," *Science,* LXXXIV (November 6, 1936), 402.

The study of the atomic microcosm is the study of the ultimate nature of matter. In virtual desperation, science attempts to explain the pattern to be found within the atom, but the picture becomes ever more complex. It is apparent, moreover, that physical science can push back the secrets involved only as far as its undefined terms. There the human intellect seems to cease functioning as man does not possess an intuitive knowledge of the nature of such a thing as "energy." Moreover, if an electron, for example, is really a fundamental corpuscle there cannot be anything in terms of which it can be constructed or even described. The fundamental essence of matter, it appears, must remain inscrutable.

Conclusion

Several years ago a physicist who was a student of atomic theory had a dream. A knight in full armor was struggling with an antagonist who was surrounded by fog. The struggle was most unequal since the antagonist could not be seen. At times the mist would seem to clear away, and the knight would display renewed activity. But the increased fury of the combat invariably caused the fog to thicken and the battle again seemed hopelessly lost. Perhaps every thinker in the field of physical phenomena has moments when he despairs as did the physicist in his dream. Science is always striving toward a perfection of understanding which, however, paradoxically seems to grow more remote as the ideal is approached. It appears to be one of the lessons of science to accept knowledge as ever tentative and always imperfect; yet the true scientist is never a pessimist.

The stories of the atom and the astronomical universe as here told must be considered as mere synopses of what could be written in many volumes. As such matters are considered, some men thrill in the anticipation of new discoveries; others see only an indication of new discouragements ahead. Some thinkers see man triumphing over his physical environment and are convinced that nature is being forced to surrender her secrets; others see a partial unveiling of the greatness of Divinity, just enough to remind man of his own insignificance; while the view of other students, typified by that of W. B. Smith, is interpreted by C. J. Keyser with some favor in the words:

> The whole world of physical facts—space, time, rivers, rocks, plant bodies, animal bodies, atoms, stars, nebulae—is just an immense and complicated system of symbols continually made, unmade, and remade by mind (soul, spirit), in response to the natural needs of mind, to represent, without copying or resembling, activities of mind. Mind is the sole Reality, all else . . . being only a mind-required, mind-made, mind-sustained, mind-symbolizing, mind-revealing Pageant.[5]

It is only to be concluded that the actual status of knowledge in regard to the physical universe is still unknown.

Just a few years ago it was firmly believed that science had reached its maturity. Research was indulged in for the purpose of ascertaining the next decimal place in a physical constant. Now the attitude of the age is reflected in the following remark from the pen of Lincoln Steffens, "In science, probably 99 per cent of the knowable has to be discovered. We know only a few streaks about astronomy. Chemistry and physics are little more than a sparkling mass of questions."

As a result of the studies in the physical sciences of the twentieth century there has been a marked destruction of the artificial barriers which separate them; this is especially true in the theoretical sciences. For example, the chemist must have an ample background in physics and in mathematics; and the astronomer must study physics, chemistry, mathematics, and geology. Moreover, virtually all theoretical scientists of repute are familiar with many of the important tenets of philosophy. The situation is being recognized in many educational institutions which are being reorganized into broad divisions instead of the conventional departments. Perhaps the physical sciences will once again be integrated under the title of "natural philosophy."

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[5] C. J. Keyser, *Mathematics and the Question of Cosmic Mind* (New York: Scripta Mathematica, Yeshiva College, 1935), pp. 61-62.

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II. EVOLUTION, MAN, AND EDUCATION

EVOLUTION

FROM time immemorial mankind has sought a solution to the problem of how species of living things came into existence, and it would be difficult to find a primitive people whose mythology does not embrace a tale of creation. Five rather formal explanations of the origin of living things on the earth are to be found in the literature on the subject, and of these only two are regarded today as worthy of serious consideration: (1) special creation or fixism, and (2) organic evolution or transformism.

Adherents of fixism maintain that all species of organisms now on the earth were in the beginning created by a divine power, and that these organisms have persisted in essential sameness from the dawn of life to the present. They regard change as possible but not to the extent of giving rise to new species. This explanation rests upon the literal interpretation of the Mosaic account of creation.

Evolution may be defined as a universal process of more or less gradual, more or less orderly, and more or less progressive change. This involves various types of change, but, as our interest is in the evolution of living things, we shall consider only organic evolution, or transformism. By transformism we mean that no living thing remains exactly the same for any long period of time; that organisms have been and are now transforming, producing new kinds of living things; that the present species of living things are the modified descendants of earlier forms of life; that new species arise from existing ones by descent with modification.

As interpreted by opponents of transformism, one of the important distinctions between fixism and transformism is that the former recognizes a higher power as responsible for the creation of organisms, while the latter dispenses with a divine power since it postulates that life originated and developed fortuitously. This is, however, a very unfair statement of the situation. While some naturalists adhere to a fortuitous and mechanistic interpretation of the origin of living things, this point of view is by no means universal among them. They do feel that it is not the task of science to investigate the nature or workings of this directing force, but this is a long way from denying its existence. Naturalists in general are, however, of the opinion that the first forms of life evolved from the inorganic. The basic difference between transformism and fixism is not the non-existence versus the existence of a higher directing power; not a question of who or what created species, but rather one of the method used in the creation of new species. Creation by evolution calls for no greater potency on the part of the creator than does sudden creation of full-blown forms.

Early Christian theology was strongly tinctured with Greek philosophy inasmuch as some of the early church fathers were well grounded in Greek philosophic thought. Philo of Alexandria in the first century of the Christian Era introduced the ‘‘Hellenizing of the Old Testament,’’ or the allegorical method of exegesis, and Gregory of Nyssa (331-396) gave a partly naturalistic interpretation which was completed by Saint Augustine (353-430). Augustine expressed belief in the symbolic nature of the biblical account of creation and cautioned his readers against looking to the scriptures for scientific truths. In fact, the Aristotelian conception of gradual ascent and perfection of life led to Augustine’s naturalistic interpretation of the Mosaic account of creation,[1] and the reaction against this interpretation of the origin and development of life came only when Christian theology shook off Aristotelianism.

A strong reaction against the Augustinian outlook came when the influential Spanish theologian Suarez (1548-1617), in his vigorous fight for special creation, insisted upon a literal interpretation of the Mosaic account. Further support to this was given by John Milton, although perhaps not intentionally, whose *Paradise Lost* was a dramatic paraphrase of the account of creation in the book of Genesis, enlarged and decorated by Milton's imagination. Until the middle of the nineteenth century, *Paradise Lost* was regarded as much a religious work as a literary one; in fact, as an inspired authority. Moreover Milton's book was often quoted as biblical material. It was used as a text in schools and during the eighteenth century required more than one hundred editions to meet the demand.

The position of fixism was greatly strengthened also by Linnaeus (1707-1778), founder of systematic biology and a man of great scientific and popular influence, who in the early part of his career firmly adhered to the position that there are just as many species of organisms in the world as were created in the beginning.

Much of the antagonism to evolution has come from the general public, aroused by leading adversaries who confused the *principle* with the *theories* of evolution. There is a vast difference between the two. Even William Jennings Bryan, that outstanding, well meaning, but misguided advocate of special creation, who made such a vigorous attack upon evolution some years ago, failed to recognize the existence of such a distinction. He firmly believed that if he succeeded in overthrowing Darwinism he thereby would ring the death knell of evolution. Nothing could be further from the truth, for Darwinism is only one theory endeavoring to explain how evolution takes place. There is almost universal agreement among scientists that transformism is valid, and no thoroughgoing scientist now doubts for a moment the existence of evolution as a well established principle. On the other hand, the theories of evolution are attempts to explain how it has occurred; how species of organisms have given rise to new species. Examples of such are Darwin's theory of natural selection, Lamarck's theory of use and disuse, and De Vries' mutation theory. Although there is marked uniformity of opinion among scientists as to the validity of the principle of evolution itself, there is wide divergence of opinion among these same men as to the theories, that is, regarding the factors which have brought about the transmutation of organic species. That evolution has occurred is a biological axiom; but it is one thing to know that evolution occurs, and another to understand how it takes place.

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[1] H. F. Osborn, *From the Greeks to Darwin* (New York: Macmillan Co., 1929), p. 11.

Contrary to popular conception, the principle of evolution did not originate in the nineteenth century with Charles Darwin; in reality, it was in its essentials announced in the sixth century B. C. by Anaximander, and in the fifth century B. C. by Empedocles, who had a general conception of the idea of the survival of the fittest. It is well to point out that Darwin's contribution to the development of the concept of evolution was that he placed the old idea upon a sound basis of scientific data, gave to it clear expression and brought it before the attention of mankind in general. From the time of Anaximander to the present a number of theories of evolution have been set forth, and out of this number few have survived critical investigation, and even these only in part. Let us proceed to a consideration and an evaluation of these theories which seem to have promise.

A. LAMARCK'S THEORY OF USE AND DISUSE

In the year 1809, Lamarck published his theory of evolution, which contained two fundamental propositions: use and disuse, and the inheritance of acquired characters. By the former, Lamarck meant that bodies of organisms become modified by use or disuse of their own organs; those which are constantly used develop, while those little or not at all used degenerate and atrophy. This is accepted as biologically sound and there is abundant evidence in living organisms to substantiate the contention. Criticism of Lamarck's theory of evolution has been directed wholly against his second proposition, the inheritance of acquired characters, which claims that modifications, developed as the result of use or disuse of organs, are inherited. Lamarck supposed that the environment, by influencing the activities of the organs, could have an indirect effect in modifying the organs themselves. A number of naturalists following Lamarck added the idea that environment produced modifications by direct action, not merely by changing the organism's physiological processes. The Lamarckian point of view contends that characteristics developed or acquired by an individual during his lifetime as the result of his own effort or contact with environment (such as musical skill, which is an individual response to environment) are handed on as such to succeeding generations.

Critique of Lamarck's Theory

Long ago, Weismann, in seeking to repudiate the Lamarckian hypothesis, maintained that all sexually reproducing animals have two rather distinct kinds of tissue—germplasm and somatoplasm—the former represented by cells specialized for reproduction, the latter by those of the body tissues. He believed that the germplasm was to some extent insulated from the soma, influencing the latter but not being influenced by it in turn. He did not regard the germplasm as susceptible to the environmental influences which wrought modifications in the soma. Germplasm gave rise to new germplasm, as well as to somatoplasm, but the soma never gave rise to germplasm. It is now known that the last mentioned distinction scarcely exists in plants and is of less universal application in animals than Weismann believed. His theory of heredity comprised a fixed and unchangeable germplasm in which evolution resulted only from recombinations due to sexual reproduction;

in other words, to a reassortment of the parts of the germplasm. Since, in his opinion, the germplasm was quite independent of, and insulated from, the soma, it admitted of no change from the outside. Hence, modifications brought about in the soma as the result of the influence of environmental stimuli in no way affected the germplasm, and, therefore, the modifications were not hereditary. There was no opportunity whereby the soma might make a contribution to the heritage of the species. Weismann believed that all evolution proceeded by selection among rearrangements of the parts of the germplasm, and until the latter part of his life strongly supported evolution as entirely controlled by natural selection.

Shull[2] has well pointed out that every truly Lamarckian experiment was concerned with environmental stimuli which affected the soma, but evidently could in no way reach the germ cells directly. They were external to the units of heredity, the genes. Had the variations wrought by these stimuli been passed on to succeeding generations, it would be necessary to believe that the modifications in the soma in some way had been communicated to the genes in the germ cells. This is the essence of Lamarckianism. However, not one of the experiments on the inheritance of acquired characters has furnished decisive proof that modifications effected in the soma by environmental agents have been transferred to the germplasm. Biologists are quite thoroughly convinced that somatic modifications, induced by environmental agencies, cannot in turn impress their stamp upon the genes. Thus no such variation could be hereditary nor could it have any significance from an evolutionary viewpoint. In all fairness, however, it should be said that the time factor never has been taken adequately into consideration in the experimental study of the inheritance of acquired characters. If germinal changes, transferred from the soma, have occurred as a result of the influence of environment, such modifications obviously have been very, very slow.

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[2] A. F. Shull, *Evolution* (New York: McGraw-Hill, 1936), p. 98.

The appeal which the Lamarckian principle has made to a large number of biologists is doubtless attributable to the belief that the fitness of organisms for their environment is in some manner explained by the inheritance of modifications resulting from use and disuse. However, there is no reason to suppose that responses to environment on the part of the organism must be useful. They are often the opposite, as shown by the experiments of F. B. Sumner.

B. DARWIN'S THEORY OF NATURAL SELECTION

The four basic tenets of this theory were set forth in Darwin's *Origin of Species,* published in 1859, and are:

1. *Overproduction.* Among all species of organisms there is produced a greater number of offspring than can possibly survive, because of economic and other limitations. When we consider, for example, that an individual oyster usually produces about 16,000,000 eggs, and some fishes even more, we realize the vastness of overproduction and the possible effects of interruption of the natural balance in such species. It has been estimated that if all the progeny of one oyster survived and multiplied until there were great, great grandchildren, the heap of shells would be eight times the size of the earth. This logically results in the second Darwinian proposition.
2. *Competition or struggle for existence.* Overproduction, with its consequent lack of the necessities of life for all, must inevitably result in merciless competition. The organisms concerned in keen struggle are pitted one against the other, and whether the conflict is of tooth and claw, or merely a matter of the early bird getting the worm, some individuals must be eliminated.
3. *Variation.* Among the individuals of a species there is a considerable amount of variation. Darwin recognized that some of these modifications were not transmitted, but he never fully understood the basic distinction between inherited modifications and those temporary variations attributable to environment. Some variations were favorable, aiding the organism in its effort to survive, others harmful, and still others indifferent or neutral.

4. *Adaptation—Survival of the fittest or natural selection.* Survival is determined by the inherent characteristics or variations of the individual. Those individuals possessing favorable variations or characteristics, which aid them in adapting or adjusting themselves to the environment, are thus better equipped to survive—are selected out by nature. It is in competition that the factor of usefulness of characteristics is pre-eminent. If struggle is merely in the form of passive competition for a limited food supply, keenness of the senses involved in the search for food might decide the winner. Some slight variation in speed might well favor the faster animal in seeking the same prey.

   Natural selection may be compared by analogy to a sieve into which three sorts of variations are poured; those which are favorable and thus aid organisms in their struggle for existence; a second kind which are harmful under the same conditions; and third, neutral variations, which neither aid nor harm organisms in their struggle. The function of the sieve is to retain the favorable variations, allowing the unfavorable ones to pass through, while only incidentally affecting the neutral ones.

On the basis that an advantageous modification aided the organism in the competition, this variation would be expected to survive. Assuming that this peculiarity would frequently be inherited, each succeeding generation, through continued selection, would display, to an increasing degree, the advantageous peculiarity until all survivors eventually would be of the favored type. In other words, the whole species would have changed in this one regard. As a general result there would be continuing evolution, with a gradual separation of one into several or many species.

Critique of Darwin's Theory

It is well to recognize that Darwin himself did not regard natural selection as a sufficient explanation of evolution, but realized there was also much evidence for environment as a formative factor.

1. Natural selection only incidentally affects indifferent characters. Neutral characters, such as slight variations in color and pattern of insects, which neither help nor harm the individual in adaptation to the environment, are too numerous to be only incidentally retained and never could be accounted for by natural selection; they are only incidentally retained or modified through association with other characteristics. It would seem that characters must be either useful or harmful to have evolutionary value, but we have come to realize that many variations exist for which we have discovered no purpose. The individuals which survive must perpetuate many characters that have no decisive part in their survival.[3] Hence natural selection does not account for uselessness. If natural selection alone were responsible for evolutionary change resulting in a complex organ such as the eye, all modifications in that direction would have to be useful.

2. It is hardly likely that only the fittest survive. Survival in nature depends in part upon the keenness of competition. Where competition is not close, where there is food, water, and space for all, many unfit are certain to survive. We know that adaptation is never even approximately perfect, and that the survival of the fittest often operates in a very loose and imperfect manner. For example, destruction of numerous organisms soon after birth occurs during early stages of metamorphosis and is accidental. If the struggle for existence is regarded as a competition among individuals of the same species, it is, as pointed out by Shull,[4] probably less important than Darwin supposed. Moreover, if it be looked upon merely as the conflict of the organism with its environment, the element of competition is not involved, since there is a sufficient number of destructive environmental agencies to prevent species from ever reaching the competitive stage. And this does not mean there is no natural selection; it simply means that the struggle for existence in the ordinary sense of competition

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[3] A. W. Lindsey, *The Problems of Evolution* (New York: Macmillan Co., 1931), p. 117.

[4] Shull, *op. cit.*, p. 151.

among individuals of the same species for space, food, etc., is not so fierce as has often been thought. Natural selection is not nullified by such accidental elimination; it still functions among the survivors.

The theory of natural selection formerly was interpreted as meaning that advantageous modifications enabled an organism to survive, while unfavorable ones caused it to perish. Shull,[5] however, is convinced that success or failure depends on numbers, in that large numbers, regardless of how attained, constitute the best assurance of permanence, and that life or death are not the only alternatives. Any advantage in numbers secured in one generation, if due to some favorable inherited quality, tends to be accentuated in each successive generation. Environmental or accidental causes of destruction should affect all types, from favorable to unfavorable, equally, so that the favored types should retain their numerical advantage. In other words, natural selection need not deal life-and-death blows in order to function; mere differential numbers are sufficient. He is further of the opinion that, while usefulness is necessary in a characteristic that is to be favored by natural selection, this must be an advantage which increases number of descendants. In other words the type of individual organism which produces the most offspring is the one which most markedly influences evolution. A trait may be of very great advantage to an individual, as an individual, and still have no evolutionary significance whatever.

3. It does not account for the origin of variations and thus for the origin of new species. Darwin began with variations, took them for granted, and made little inquiry into their cause, regarding them for the most part as inherent. To him some variations were, others were not, transmitted from generation to generation, but he did not fully recognize that there were two basically different types of modifications, one permanent and hereditary, the other temporary, caused by the influence of environment and not transmissible. He thus made no

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[5] Shull, *op. cit.*, p. 153.

attempt to explain the source of variations, but merely accepted them as a potential basis of evolution through selection. At this point it is well to indicate that no theory of evolution which fails to account for the origin of variations can be regarded as at all adequate, for this is one of the major problems of evolution.

4. Another weakness of Darwin's theory is that, granting the existence of variations, it still is impossible to see how new species could have originated through natural selection of small variations. It calls for an undue extension of the imagination to believe that the first minute steps in the direction of a complex adaptive organ, such as the eye, could have any survival value. Lindsey[6] has well pointed out that the all-important question for the critic of Darwin is whether further research in biology bears out his view that variations which produce new species are produced by the gradual accumulation in successive generations of insensible differences, or whether these changes are sudden and of considerable magnitude.

Summarily, we may say that Darwin's theory, as well as its later modifications, are no longer regarded as adequate expressions of the way in which new species are formed. They are explanations of the adaptations of species through the selective action of the environment on the characters already present, and are, therefore, theories of adaptation rather than of species formation. Natural selection has power to preserve or eliminate types after they have come into existence, but what is sorely needed in a satisfactory theory of evolution is an explanation of how new species come into existence. Here natural selection fails completely. Although the theory is widely applicable, it is only one of several partial explanations of evolutionary change. It is still accepted as an accurate explanation of certain natural processes which play a part in evolution, and is a genuine force for adaptative improvement, even if nothing happens but the constant elimination of the most unfit. Moreover as shown by Shull,[7] while usefulness is necessary in a character that is to be favored by natural selection, this must be an advantage which increases number of offspring, and there are other ways of assuring the permanence of a given type besides eliminating its competitors. The struggle for existence need not occur in the form of a competition, and there may actually be some plain accident in the fate of classes of organisms.

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[6] Lindsey, *op. cit.*, p. 113.

C. THE MUTATION THEORY

Mutation may be defined as any hereditary modification of the germplasm regardless of magnitude; it is a heritable variation by sudden, discontinuous, random change in the germinal constitution of the organism.

Seeking for a more valid explanation than that of Lamarck and of Darwin as to how evolution took place, Saint Hilaire (1772-1844), Galton in 1889, and Bateson in 1894, were led to another view—that discontinuous variations (mutations) were the chief sources of the new heritable differences on which natural selection acted. This view was strongly developed by Hugo de Vries,[8] who introduced the term *mutation.* His results from breeding experiments seemed to indicate that natural or artificial selection of small graded or continuous variations was not an important method of evolutionary change, and he advanced the hypothesis that sudden, large, discontinuous variations are of primary value. Most of his mutants seemed to represent the beginnings of new varieties or species which had arisen *at one step* from the wild type. Strangely enough, intensive genetic and cytological studies of *Oenothera,* the evening primrose with which he worked, have shown that not one but a number of processes are involved in the origin of the new types of this genus, and that some of them represent not mutation but a form of recombination. Only one of his original "mutants" has been shown to be due to gene mutation. Hence, although mutation has been well substantiated in more recent years in many species of organisms, all but one of the hereditary changes observed by De Vries have been shown to be due to causes other than mutation.

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[7] Shull, *op. cit.,* pp. 165, 212.

[8] Hugo de Vries, *The Mutation Theory,* 2 vols. (Chicago: Open Court Co., 1909, 1910).

There are two main types of germinal change; namely, factor or gene mutation, and various structural and numerical aberrations and adjustments of chromosomes. Gene mutations are presumably chemical alterations, and when one gene becomes thus modified it operates, in conjunction with other genes, to produce one or more new hereditary characteristics in the organism which contains it.

Various gene mutations are known in numerous kinds of organisms and are of wide variety. Some affect eye color, color and length of fur, shape, size and color of grain as in corn. Some mutations affect physiological properties, like the protein content of corn. It is impossible, however, to make any sharp distinction between structural and physiological effects of mutation. For example, nearly all the hundreds of gene mutations in the fruit fly, *Drosophila,* which are recognized by structure or color, unfavorably affect the length of life and fertility of these flies. Although most mutations appear to handicap the organism, we must not assume that a major objection to the theory is that all mutations are disadvantageous to the organism from the standpoint of survival, as there are some which are quite the opposite. Thus, Timofeeff-Ressovsky has found the viability of various gene mutations in the fruit fly, *Drosophila funebris,* to vary greatly, and that a few of the variations did exceed the wild type.

Besides mutations affecting individual genes, there are other genetic changes involving the chromosome content of cells or the arrangement and number of genes in the chromosomes—all these taking place without change in any particular gene. One of the simplest of these changes, and the most likely to result in immediate, marked, and successful evolutionary change, is a doubling of the number of chromosomes. This doubling occurs immediately after the egg is fertilized, at the very beginning of development. The result is an organism with twice the usual number of chromosomes differing in various respects from the organism from which it came. A form of the evening primrose, *Oenothera gigas,* has occasionally arisen in pedigreed cultures from *Oenothera lamarckiana,* by such a process of chromosome doubling.

Various other chromosomal modifications are possible, such as the occurrence of extra chromosomes and various sorts of fragmentation, translocation of chromosome parts, etc. A discussion of these processes would be too technical to interest the reader for whom this chapter is intended. Moreover, the degree of successful evolution derivable from such aberrations is questionable.

Evolution requires change, or the occurrence of new hereditary variation, and any acceptable theory of evolution must explain the origin of such variation. In the light of present day knowledge, we may say that the primary sources of variation in organisms are gene mutation and structural or numerical readjustments of chromosomes. However, one of the criticisms leveled at the primary sources of variation mentioned above is that they fail to explain the cause of variation. This must be admitted. After all, gene mutation and chromosomal change are only types of variation, and to explain how evolution occurs one must ascertain the reason or reasons for the occurrence of such change.

It has already been pointed out that the influence of environment, in the Lamarckian sense, gave no explanation of the source or cause of variations except those which occurred in the soma. Such somatic variations are of no evolutionary significance whatever, since they are not hereditary. Let us turn our attention now to the *direct* effect of environment upon the *germ cells,* and therefore the genes. When the environmental agent is one that can reach the germ cells directly, so that the modification of the somatic tissue is not a necessary step in the process, the induction of hereditary variations rests on a much more plausible basis.

Attempts to modify genes experimentally by artificial means have been rather numerous. The outstanding productions of mutations by such artificial means are those by Muller using X rays on *Drosophila,* and Stadler on barley by use of radium treatment; Muller, Altenburg, Goldschmidt, Jollos, Plough, and Plough and Ives on *Drosophila* with heat treatment; Stockard, as well as Pearl, using alcohol on guinea pigs and poultry; and Babcock and Collins, as well as Hanson and Heys, using natural earth radiation on the fruit fly. These experiments have resulted in the production of numerous mutations, as well as chromosomal aberrations, some of which are identical with those produced in nature. However, the fact that radiation and chemical agents of various kinds produce mutation experimentally is no guarantee that they are caused by such radiation in nature. Hence, by way of summary we may say, after considering the direct effect of environmental stimuli on genes, that the cause of natural mutations is still much in doubt. The primary sources of variation *are* gene mutation and chromosomal aberrations, but up to the present we lack a satisfactory explanation of the cause of such variations.

D. EVOLUTION BY LARGE STEPS

In 1940, Goldschmidt published a book entitled *The Material Basis of Evolution,* presenting what has been referred to as the only basically new theory of evolution set forth in this century. While all other theories have regarded transformism as occurring gradually by the accumulation of more or less small changes, Goldschmidt views evolution as occurring only by large and sudden steps, cataclysmic changes, which involve complete change of the primary pattern of a species, genus or family into a new one. He completely discredits the possibility of evolution resulting from mutations, maintaining that such small modifications can lead to diversification only within the species and have nothing whatever to do with the origin of new species.

By way of evaluation of Goldschmidt's theory, suffice it to say that although biologists are of the opinion that he has marshaled an impressive array of evidence in its favor, they nevertheless consider that acceptance of the theory would involve a belief in miracles, extending far beyond the confines of biological fact and proof.

Modern Evolutionary Outlook

Modern research on evolution is largely along genetic lines, and Shull's textbook on evolution, published in 1936, is the best modern comprehensive treatment of the subject. Past treatises have placed undue emphasis upon proving that evolution is valid. There is today little need for any exhaustive consideration of this phase, at least among scientists. Similarly, adaptation, as well as other subjects, has been greatly overdone in practically every book on evolution. What the modern student needs to know about change of species is chiefly the how and why, and this cannot be accomplished without an application of our knowledge of genetics to the problem. It must show exactly how evolution must work in the presence of the typical mechanism of heredity.[9] Shull has done an admirable job of applying our modern knowledge of genetics to the problems of evolution, especially the origin of species.

Progress in our knowledge of inheritance is at present very rapid. The genetic approach to evolution has been carried far, largely due to outstanding achievements in tracing the results of chance and some special features of the operations of heredity. This can be attributed principally to the statistical approach to the subject made by Wright, Haldane, and Fisher, which has opened an important and extensive field of genetics that had apparently been closed. Without going into any detail with reference to these studies, it may be said that the not too distant future may show some significant results along the line of explaining the origin of species and cause of variation from this point of view.

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[9] Shull, *op. cit.*, p. vi.

The Direction of Evolutionary Change

One of the important problems of evolution is the *direction* of change. Darwin believed that variation occurred in every direction and that natural selection acted upon these fortuitous modifications. In 1930, Fisher[10] likewise assumed that mutation was purely fortuitous. This contention has been seriously questioned, and today we are very desirous of knowing the direction which evolution has taken; of ascertaining whether there has been any guidance in the process of variation or it has been a purely accidental and aimless matter.

We again conclude with Shull[11] that, if mutations are the raw material of evolution as geneticists firmly believe they are, it is clear that evolution may be directed in two general ways: first, by the occurrence of mutations of only certain types, and not of others; and second, by the differential survival of such variations or their differential spread through the population. Contrary to the viewpoint of many biologists that mutations are fortuitous in the sense that they have no causal relation, and therefore evolution brought about by these aimless and ungoverned changes would end in chaos, Shull furnishes ample evidence in support of his contention that such modifications do not occur in every conceivable direction.

Formerly many biologists believed that the *direction of mutation* might replace other guiding agencies of evolution. This led to the question whether successive mutations in certain lines of descent bore any relation to each other with respect to the direction of their occurrence. Fundamentally, the question at issue was the old idea of *orthogenesis,* or evolution in a straight line. Shull[12] has concluded that although mutation is not random, but limited in its occurrence by the structure of the genes, repeated mutations are not directed as a series, are not orthogenetic, and that no genuine evolution is accomplished in this way.

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[10] R. A. Fisher, *The Genetical Theory of Natural Selection* (Oxford: Clarendon Press, 1930).

[11] Shull, *op. cit.,* p. 123.

[12] Shull, *op. cit.,* p. 131.

In view of the recognition of the widespread occurrence of non-adaptive change, explanations for it naturally have been sought. These have ranged from the direct action of the environment to various kinds of agencies internal to the organism itself. The most inclusive expression of the view that direction of evolution is determined by internal forces in the organism was that of Eimer, which has been named orthogenesis. By this was meant that evolution occurs in a straight line directed by an internal force. He believed that modification was effected by external environment, but that the guidance of the change was attributable to something within the organism. Paleontology offers many examples of successive stages in one direction, such as the step-by-step reduction of the toes of the horse from four to one.

Most orthogenesis, as defined above, would result in much non-adaptive change, since evolutionary development would occur in a straight line, toward a definite goal, regardless of the usefulness of the characters produced. Thus it would only occasionally, as a matter of chance, lead to useful modification. Again Shull[13] has observed that if orthogenesis could be satisfactorily explained we would no doubt have a solution for most, if not all, of the problems of useless modifications.

With respect to orthogenesis in general, we may say that, historically, evolutionary theory has been dominated largely by a desire to furnish an explanation of adaptation. The fitness of organisms to their environment, and the universal usefulness or advantage of modifications to the organisms which possess them, have always fascinated the minds of naturalists. The appeal which Lamarck's theory of evolution made rested upon the fact that it seemed to provide an explanation of adaptive evolution, while the wide and rapid acceptance of Darwin's theory was at least in part due to its relation to usefulness. It is becoming increasingly evident, however, that adaptation is not the outstanding characteristic of life; that fitness for environment is not the most important evolutionary phenomenon crying for explanation; and that organisms frequently have modifications which are of no use whatever to them, that is, are non-adaptive.

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[13] Shull, *op. cit.,* p. 238.

Considering for a moment the matter of chance in relation to non-adaptive change, it may be said that, to whatever extent the factors of evolution are purely fortuitous, they are more likely to produce harmful than beneficial results. Wright[14] has calculated some of the possibilities of chance in evolution, and concluded that the differences between varieties of one species, or even between species of the same genus, may be due to chance. If, as indicated by Shull, this conclusion is correct, one of the difficulties that has always beset the natural selectionists has been removed; the non-adaptiveness of specific differences is thus no longer a stumbling block to selection theory, for it simply has another explanation—chance. Chance as the source of non-adaptiveness cannot, however, be regarded as operating much beyond single changes, such as individual mutations. It cannot serve as an explanation of the overspecialization of the dinosaurs, for example, and it is mainly those long series of non-adaptive changes that have impressed naturalists as constituting a problem.

Summarily we may say that although some of the most important problems in evolution are associated with non-adaptive characters, the explanation of these useless features cannot yet be regarded as satisfactory.

We must realize that, although rapid progress has been made recently in the solution of some of the problems of evolution, by no means all have been solved. Such questions as a completely satisfactory explanation of the beginnings of complex characters, the origins of non-adaptive modifications and the source of mutations still await solution.

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[14] Sewell Wright, "Evolution in Mendelian Populations," *Genetics,* XVI (1931), 97-159.

EVOLUTION AND MAN

Most students of human antiquity are convinced that man is about 500,000 years old, although some would assign a longer period. Modern man is about 30,000 years old, and in this time has changed comparatively little. All the living races belong to one species, *Homo sapiens.* Seligman[15] has presented the relative position of the more important species and genera of extinct man in relation to the races of the present day. For our purpose a study of these extinct forms has little value, but it is very important to note that none of these early men stands in the direct line of ascent of modern man. We must abandon the traditional idea of the "missing link." There is in reality no such missing link joining us to the apes, but numerous forms bringing us nearer as we go back in time to the common anthropoid ancestor. With the limited available fossil remains it is impossible to establish a continuity of descent in any way comparable with that of the horse, for example, for which we have a very close series of fossils. The modern scientific outlook on human evolution is admirably expressed by Keith:[16]

> In our first youthful burst of Darwinianism we pictured human evolution as a simple procession of forms leading from ape to man. Each age, as it passed, transformed the men of the time one stage nearer to us—one more distant from the ape. The true picture is very different. We have to conceive an ancient world in which each region or area was sparsely occupied or inhabited by its own particular genus or type of mankind; these regional genera or types were in turn broken up into local species or varieties, just as we see today in the

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[15] C. G. Seligman, *The Characteristics and Distribution of the Human Race: An Introduction to Ethnology.* In William Rose, *An Outline of Modern Knowledge* (London: Victor Gollancz, Ltd., 1931), pp. 432-34.

[16] Arthur Keith, *The Antiquity of Man* (Philadelphia: J. B. Lippincott Company, 1931), p. 283.

case of man's nearest surviving relatives—the anthropoid apes of Africa and of Farther Asia. Then out of that great welter of ancient human forms one species became dominant, and ultimately the sole surviving form—the species represented by the modern races of mankind.

Increasing aridity of parts of the earth's surface, especially in Central Asia where the human stock seems to have originated, caused a gradual disappearance of the forests, which seems to have been one of the impelling causes of the evolution of man. With the gradual abandonment of arboreal life and the growing ability to walk erect, it became possible for the precursors of man to make freer use of the hands—a most important factor in early human development. Investigators have concluded that this situation, commonly referred to as the emancipation of the forelimb, unquestionably bore a close relation to mental development in that the increased use of the hands was accompanied by, and closely related to, the development of the brain.

Gregory and Osborn, well known authorities on human evolution, have violently disagreed on many aspects of human development, but are of one mind on the following points:

1. There is overwhelming evidence of a remote community of origin between man and the anthropoid apes.
2. There is strong evidence for an Eocene arboreal stage in our ancestry.
3. That in the forest remain all the backward, conservative types, while on the plateaus and uplands are found the alert, progressive, forward looking types.

Physically, man has a number of features which distinguish him from his anthropoid precursors; however, our interest in man is largely in his intellect. Suffice it to say that the most important of his distinctive features are: (1) the brain, especially the cerebrum—larger, more complex, and more highly developed; (2) more erect posture. The spinal column has four distinct curves, and is adapted to the upright position, which has an important bearing upon sight, and keeps man more alert; (3) the fully developed power of articulate speech (this is associated with a more highly developed vocal apparatus); (4) freedom of the hand; (5) the opposable thumb; (6) prolongation of infancy.

Fundamentally, however, man is physically and physiologically little different from the amoeba. His fundamental processes are the same. Man is an animal and is often surpassed by other animals in the efficiency of many traits in common, notably the sense organs.

Obviously, therefore, man has little justification for existence physically. What, then, sets him off from animals? Wherein does his justification for existence reside? As a human animal he has attained powers with a dimension unrepresented in any life that precedes him. Intelligence may be thought of as another dimension (although represented in lower forms of animal life), and human life has largely faded into that dimension. The more highly developed and more finely adjusted nervous system of man largely constitutes the basis of his ability to make superior adjustments. Control through this highly developed and organized nervous system is the outstanding human characteristic that so markedly differentiates man as the most intelligent and adaptable animal, thus giving him superiority over other forms.

APPLICATIONS OF BIOLOGY TO EDUCATION

Heritage versus Environment

Individual differences in man are expressed in a multitude of ways, such as hair color, eye color, stature, susceptibility to disease, and intelligence. All persons cannot do the same things equally well. One has marked musical ability while another has no musical sense whatever; another has marked executive ability, or qualities of leadership, while even his own brother may be woefully lacking along such lines. It must be obvious to everyone that variation among living things is universal, so we direct our attention to the source of such variation in man, as it has a pronounced bearing upon education.

The answers to the question of the cause of individual differences naturally cluster around two seemingly opposed points of view: (1) Heredity is the cause of such variations; (2) environment is responsible for individual human differences. The strongest supporter of the hereditary point of view has usually been the biologist, and more particularly the geneticist. The most forceful advocates of the environmental position, on the other hand, have been the sociologist, the political scientist, the ecologist and an occasional psychologist.

We must agree with Hirsch[17] when he says that the answer to the question of how far human nature can be modified by social nurture has, in large part, determined man's social, political, economic and educational philosophy. For example, those who incline to favor political aristocracy, such as hereditary rulership, emphasize original hereditary differences as the dominant force, while those who favor a democratic system place more emphasis upon the influence of environment. The philosophic temper of the seventeenth and eighteenth centuries favored the belief that man is essentially the product of his physical, social and educational environments, and that innately all men are equal; that we all begin life with similar or identical heritages, and that the differences among men are due entirely to dissimilarities of opportunity and environment.

The modern behavioristic school of psychology formulated as its basic problem the discovery of simple physiological mechanisms out of which is integrated the behavior of the human organism as a whole, and an analysis of the synthesizing process of habit formation. This psychology holds that one habit upon another is formed by the conditioning environment, which, acting upon the given physiological patterns, actually molds the integrated behavior of the adult.

It has been rather generally agreed that these elements of behavior are physiological in nature, and that they are for the most part only dimly conscious to the individual. However, very heated controversy has taken place regarding the question

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[17] N. D. M. Hirsch, *Twins: Heredity and Environment* (Cambridge: Harvard University Press, 1930).

whether they are fixed in some simple inherited pattern at birth, so that the basic human traits can fairly be considered constant and unalterable, or whether they are chiefly habits formed by the environment out of a relatively plastic human nature of almost limitless possibilities.[18]

The former view was supported by Thorndike,[19] and more particularly by McDougall,[20] who worked out an elaborate scheme of original tendencies or instincts from various combinations of which mature conduct arises. Critical examination of this simple conception has led to the general conclusion that it is more profitable to look for specific reactions that can be experimentally isolated, and that in complex human behavior, habit after habit conditioned by the environment is superimposed upon these reflexes.

The practical consequence of this shift of emphasis is to place a more adequate stress on the environment as the determining factor, and thus to regard human nature as a function of the cultural situation. It is not mere accident that the idea of a fixed and simple human nature has been gladly accepted universally by conservatives opposed to social change, while opponents of the theory, such as John Dewey, hope to ameliorate social ills through education and institutional reform. The environmentalists hope to push as far into the background as possible the limits of fixed native endowments, while the other group regards the existing order as essentially a biological necessity, and these opposed tendencies are reflected in the conflict between biological and cultural determinism in all fields of social science.

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[18] J. H. Randall, *Making of the Modern Mind* (New York: Houghton Mifflin Company, 1926), p. 498.

[19] E. L. Thorndike, *Original Nature of Man* (New York: Columbia University Press, 1913).

[20] Wm. McDougall, *Introduction to Social Psychology* (Boston: John W. Luce and Co., 1926).

During the past half-century, a strong reaction to this cherished environmental ideology has set in. Owing, in large part, to the extensive study of genetics, the greater importance of heredity has been strongly urged. In fact, so potent has been this reaction that only a few years ago there was considerable danger that the pendulum might swing as far to the hereditary extreme as it had done formerly in the direction of environment. But to attribute all biological effects to heredity is probably even more harmful than to attribute all of them to environment, for it promotes a fatalistic viewpoint. In this connection, it should be mentioned that physicians as a class are very reluctant to attribute any human ill to heredity, but on the contrary assign practically all disease to environment. The physician can scarcely be condemned, as the biologist has formerly sponsored the impression that anything which was hereditary was *inexorable.* This meant that any disease or condition which was hereditary could in no way be modified by treatment. Such a fatalistic outlook, from the physician's point of view, was impossible. The same situation holds with reference to education, sociology, political science, etc. There is pronounced fallacy in the opinion that showing a character to be modifiable by heredity proves that it is in no way environmental, and vice versa.

Biologists most vigorously object to the contention sometimes set forth that all diversities of living things are attributable to environmental differences, none to genetic differences; that heredity has nothing to do with the varied aptitudes, temperaments, and achievements of individuals. There is much sound biology in the old adage, ''You can't make a silk purse out of a sow's ear.'' Surely there are normal persons whom no environment could make into outstanding musicians, great artists or noted physicians. Every normal individual has remarkable power of adjustment to diverse conditions, has the possibility of many diverse vocations, and such individual, taken early and intelligently guided, might be trained to be a musician, for example, but it would require a different method of attack to accomplish that end in different individuals. Some of the persons thus guided would be most mediocre musicians, while others might be Mendelssohns or Bachs. To attribute everything to environment encourages the disastrous belief that we can fashion all individuals on a uniform plan; this fosters neglect of individuality. The matter was well put by Jennings,[21] when he said that *the outstanding contribution of genetics to the treatment and understanding of human life is respect for individuality.*

A number of studies of twins have been undertaken over the past half century for the purpose of ascertaining the relative influence of heritage and environment. Thus Galton,[22] who studied one group of thirty-five pairs of very similar twins as compared with another of markedly unlike twins, concluded that nature prevails enormously over nurture when the differences of nurture do not exceed what is commonly to be found among persons of the same rank of society and in the same country. In close agreement with Galton is Thorndike,[23] whose study of fifty pairs of twins led him to conclude that the natures of the germ cells cause whatever similarities and differences exist in the original natures of men; that these conditions of heritage influence body and mind equally; and that the diversities resulting from such differences as obtain between the environments of New York City public school children are slight.

These studies had certain limitations. Thus Galton's investigation depended upon a method of verbal report, while Thorndike measured special abilities only, rather than general intelligence. Moreover, he himself pointed out that his tests did not entirely eliminate the possible effects of home environment.

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[21] H. S. Jennings, *The Biological Basis of Human Nature* (New York: W. W. Norton & Co., 1930), p. 180.

[22] Francis Galton, *Inquiries into Human Faculty* (New York: E. P. Dutton & Co., 1908).

[23] E. L. Thorndike, *Archives of Philosophy, Psychology and Scientific Methods* (New York: Columbia Univ. Press, 1905).

Merriman,[24] therefore, undertook an experimental investigation of twins in which he sought to eliminate the defects of the two previous investigators. He concluded that ''Environment appears to make no significant difference in the amount of twin resemblance.'' Lauterbach[25] similarly attacked the problem, and from his extensive study of 212 sets of twins favored the thesis that heredity is more potent than environment. He further concludes, in harmony with Thorndike and with Merriman, that older twins show no greater degree of resemblance than do younger ones. Also that like-sex pairs of twins show a greater degree of resemblance than unlike-sex pairs.

Hirsch,[26] in his interesting book on twins, summarizes the conclusions of a doctor's thesis presented to the Faculty of the Graduate School of Education of Harvard University in 1928 by Caleb Page. Page's results indicate that heredity is far more influential in determining growth and development than are environmental factors. Newman, and Newman, Freeman, and Holzinger,[27] as the result of their numerous studies of twins, likewise have concluded that heritage contributes far more to physical and mental development than does environment. The results obtained by Hirsch[28] are in agreement with those of these three workers.

Despite the fact that each of the above studies on twins has certain limitations, it is most interesting that they all conclude heredity greatly outweighs environment as a molding force in human life. Whether or not this be true, it seems quite obvious that heritage is a far more potent factor in human life than eighteenth century philosophy would lead us to believe.

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[24] Curtis Merriman, "The Intellectual Resemblance of Twins," *Psychological Monographs,* No. 152, 1924.

[25] C. E. Lauterbach, "Studies in Twin Resemblances," *Genetics,* X (1925).

[26] N. D. M. Hirsch, *Twins: Heredity and Environment* (Cambridge: Harvard University Press, 1930), pp. 48-49.

[27] H. H. Newman, *The Biology of Twins* (Chicago: University of Chicago Press, 1917. Also *Journal of Heredity,* XX (Feb., 1929, and March, 1929); H. H. Newman, F. N. Freeman, and K. J. Holzinger, *Twins: A Study of Heredity and Environment* (Chicago: University of Chicago Press, 1937).

[28] Hirsch, *op. cit.*

Scientists today have most certainly come to a much saner understanding regarding the relationship between heritage and environment. Instead of seeking to discover which of the two is the more important, we have come to realize that they are neither separable nor contradictory; that the organism and all its characteristics are the product of the intimate interaction of both and that they are not intrinsically antagonistic. No organic characteristic of evolutionary significance is today regarded as the product of either heredity or environment exclusively. The promising field for investigation is, therefore, not the relative merits of the two forces, but rather their universal and very intricate interaction. For example, the skin of some individuals tans when exposed to direct sunlight, that of other persons burns, or freckles. Here we have three distinct types of hereditary skin make-ups responding differently to the same environmental stimulus. It is obvious that the three types of skin could not react differently in the absence of sunlight; but it is just as obvious that the sunlight alone would be unable to produce the three different kinds of skin responses apart from the possession of hereditary skin differences to begin with. In other words, tanning, burning, and freckling are the result of the cooperation of heritage and environment; of the intricate interaction between the two.

This example is representative of a whole host of similar ones which show the absolute inseparability of heritage and environment in their influence upon living things. So closely interwoven are these two forces that it is at present futile to seek to ascertain which of the two is greater and how much is due to the influence of one or the other; both are essential. They are collaborating artists. Their finished product is the individual, yet they have different roles to play as molders of destiny.

The Biology of Superiority

Extensive studies by Galton, Pearson, Terman, Ellis, and Cattell have shown that, as regards mentality, individuals of the same family are more alike than are persons taken at random. It must be admitted that members of the same family have a more or less common environment which differs from that influencing another family. Furthermore, such common environment most assuredly plays an important part in producing similarity of mentality, temperament, and personality among close relatives. Since diversity of genetic constitution affects mentality, it must produce, on the average, similarity of mental characteristics when there is community of genes in closely related individuals, although Cattell has well said that environment holds a veto over mental development. Heritage, in some cases, may be partly obscured or counteracted by certain environments.

The similarities and differences in mentality observed by the above mentioned investigators seem, however, far too great to be accounted for by differences in environment and opportunity. Many years ago, Francis Galton set forth his eugenic belief, a basic tenet of which was that the children of superior persons have ''an enormously greater chance of turning out to be gifted in a high degree'' than do the children of ordinary men. Pearl[29] has attacked Galton's fundamental thesis, basing his contention in part upon an examination of all biographies that occupy at least one full page in the *Encyclopædia Britannica* in which study he found that ninety-five per cent of such worthies came of mediocre or inferior parentage. His conclusion, that ordinary people have produced nineteen times as many of the most eminent human beings as have people in some degree distinguished, is indisputable. It is in general harmony with Galton's objective results, for the latter, in his study of the English judges, observed that the number of distinguished men produced by mediocre people, as compared with those produced by eminent persons, was in the ratio of approximately nine to one.

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[29] Raymond Pearl, "The Biology of Superiority," *American Mercury,* XII (1927), 257-266.

While Galton and Pearl have obtained essentially the same facts, they differ widely in their interpretations of them. Galton maintained that the occurrence of eminent persons was proportionally much more frequent in distinguished families than among ordinary ones, the odds against having a distinguished offspring being five hundred to one for a mediocre person, as compared with a distinguished one. To this conclusion Pearl vigorously objects on the ground that Galton's interpretation was biologically unsound, being based upon pre-Mendelian genetics, namely Galton's ''law of ancestral inheritance.''

We biologists have profound respect for Pearl's knowledge and judgment. Yet we cannot agree when he attacks Galton's interpretation that there is a much greater chance that eminent people will come from distinguished parentage than that they will come from mediocre stock. While it is undeniable that mediocre people have produced far more distinguished offspring than have eminent persons, it would seem that Pearl has not made proper allowance for the fact that ordinary people are many times as numerous as are the distinguished. Admittedly Galton's conclusions were based upon pre-Mendelian genetics, but this alone is no proof that his conclusions were unsound. As maintained by Pearl, Mendelism teaches that the bodily expression of traits of an individual offers no absolute guarantee as to the specific characteristics which appeared in his ancestors or will appear in his progeny. The perpetual reassortment of genes at the time of reproduction precludes any reliable prediction in this direction. However, as pointed out by Conklin, Galton's ''law of ancestral inheritance'' is still valid when applied to average results in a general population. We must admit that in specific cases and as regards the mechanism of transmission of particular genes like does not always produce like. Nevertheless, on the whole and as an average of mass results, the principle is still valid. From time immemorial the belief that "like produces like" has furnished the guiding principle used as a basis of selective breeding among cultivated plants and domesticated animals. Who can deny that marked improvements had been made in the more important economic plants and animals by selection on the basis of external appearance alone long before Mendel announced his laws of inheritance?

While the works of Woods, DeCandolle, Ellis, Pearson, Terman and Cattell have numerous shortcomings, these men are nevertheless in one accord with Galton in concluding that the relatives of eminent men are much more likely to be distinguished than are persons from ordinary families. By and large, the judgment of modern biology does not support the contention that distinguished persons arise from mediocrity with greater proportionate frequency than from superiority. A fair statement of the biological outlook is that the main contribution of genetics to the biology of superiority is *that the children of superior parents are much more likely to be superior than are children born of inferior parents; that the children of inferior parents are much more likely to be inferior than are children born of superior parents; however, it is perfectly possible, by reason of the recombination of genes at the time of reproduction, for inferior parents to produce superior offspring, and for superior parents to produce inferior offspring.* Of the validity of this principle biologists in general are strongly convinced.

Clearly enough, eminence is not necessarily an accurate index of intelligence or of superiority. University professors, for example, are by no means all superior people, while on the other hand there are doubtless many superior persons doing menial labor. But the above statement is valid regardless of any measure of superiority we might employ and notwithstanding the contribution of environment to eminence, distinction, superiority, or any other name we might adopt for the class described.

The Inheritance of Acquired Characters

We turn now to another topic, namely, some educational applications of the inheritance of acquired characters, which, it will be remembered, is the essence of Lamarckianism. Acquired characters are acquisitions made by the body cells (in contrast to reproductive cells) during the lifetime of an individual. These may be quite obvious, such as skill in skating or in violin playing, or they may be more elusive, as turns of the intellect, acquired beliefs, thirst for alcoholic beverages and the like. There is no doubt as to whether such characters are acquired, for we see proof of it on every hand. The question of their inheritance is, however, a very different matter. A person may, for example, develop considerable skill in running the 100-yard dash but we have no proof that such an acquired character is passed on to his progeny. To take another illustration—Caruso became a very outstanding singer, and two things were necessary in order for him to attain such distinction: (1) inheritance of a certain physical musical ability as regards the structure of throat, vocal cords, nostrils, etc.; (2) by constant teaching and practice to develop this inherited ability; in other words, to develop skill in singing. The capacity was inherited but the skill was acquired. Caruso might have passed on the musical ability to offspring, but present knowledge shows that the skill could not have been inherited. His progeny would have to develop the necessary musical technique of their own accord, and would not be benefited in the slightest by Caruso's developed skill. In other words, the offspring would have to begin at the same point in the development of technique as did he. It is obvious, on the other hand, that the constant association between him and his children would make it possible for the latter to achieve the necessary skill more quickly than otherwise.

Since 1893, the average height of women in the United States has increased more than three inches. It seems logical to conclude that this is due entirely to environmental influences, such as improved diet, sanitation, and more outdoor life; it seems in no way hereditary, being purely an acquired character. Biologists would quite uniformly agree that return to the old environmental conditions would result in a decrease in average height.

Looking at the matter from a slightly different angle—the Chinese have for many centuries bound the feet of their female children in order that they might be small. Today the feet of a Chinese girl, whose ancestors for generations have had their feet bound, are no smaller in proportion than those of any other people. Weismann cut off the tails of mice for twenty-two successive generations and found that it had no effect whatever upon the length of the tails of succeeding generations. Docking the tails of horses, the ears of dogs etc., has failed to produced any observable effect.

It must be admitted that these illustrations are, in a sense, mutilations, and that we never can hope for any proof for or against the inheritance of acquired characters from this type of experiment. These examples are given, not as proof that the inheritance of acquired characters is invalid, but merely as illustrations to make more clear the meaning of the principle itself. Within more recent years, biologists have been performing much saner experiments in this connection than cutting off the tails of mice. In spite of this, however, it must be said that all the experiments along this line up to the very present (and there are very many of them) have furnished no sound proof of the validity of the principle in question.

In this connection, there is rather general agreement among scholars that the general average of human capacity has increased little, if any, in the last 10,000 years, or perhaps more. That is to say, Neolithic man was just as able mentally, on the average, as we are today, the differences being due to environment. Our culture and achievements are, of course, vastly advanced as compared to his, but such improvement is attributable wholly to environment, to training, education and the cumulative contributions of succeeding generations. There is marked uniformity of opinion to the effect that, if Neolithic man could be entirely removed from his ancient setting and placed in the midst of modern civilization with its environmental influences, it would be impossible to detect any appreciable differences between him and us as regards native, inherent mental ability and achievement. If, on the other hand, we compare ourselves with the Bushmen of South Africa, it seems rather obvious the differences are attributable largely to heredity.

Other Educational Implications

In 1874, Fiske, in upholding the theistic side of evolution as opposed to Huxley's interpretation, pointed out that the evolution of the physical world and lower forms of life was a sanction or inspiration for human morality, and that the whole evolutionary process tended to culminate in morality and religion. He believed that mammalian development, especially in humans, made necessary a lengthening of the period of prenatal care and infancy, and therefore promoted family life as a matrix out of which morality developed.

The prolonged period of human infancy has marked educational significance. Of all true mammals, the human infant is the most immature and helpless at birth, and unable to assume its own care for a longer period after birth than any other. With very few exceptions, mammals are adequately equipped for carrying on the regular activities of adult life within their first year.

The period of gestation, or interval from fertilization to birth, is a portion of the individual's life and must be regarded as part of the continuous process of development from impregnation to death. This uterine phase varies greatly in mammals—for example, thirteen days in the opossum, twenty days in the mouse, to twenty months in the elephant. In comparing mammals, the period of uterine development as well as duration of infancy, of course, must be considered in relation to total length of life of the species. Thus man ranks very high among the mammals in length of the gestation period, and at the very top of the scale in prolongation of infancy.

The prolonged dependence of the human child provides a long period which can be devoted to learning, and considerations favorable to educational development, such as child labor laws, bid fair to make the extension of such period compulsory.

Moreover, the physical and mental changes of adolescence, with their related stimulations to, and repressions for, social life and sex experience present for youth numerous physical, mental, and moral problems of adjustment, which need to be foreseen and planned in education at the adolescent period.

It is a very well known phenomenon that youth possesses physical vitality and sexual energy which dwindle gradually to senility as adult life advances. It cannot be maintained that this excess of vigor was provided so that inexperienced youth could make the necessary mistakes in adjusting himself to a complicated environment. Nevertheless, this surplus does stand youth in good stead in his necessity for making innumerable errors in adapting himself. Adult life does not need such abundance of energy, since it has learned how to economize time and effort by more successful discrimination in analyzing and handling problems. Education should be such as to make youth more ''sure-footed'' in attacking, judging, and making the necessary adjustments to his environment, so that this conserved vitality may be used in furthering his progress, not only for his own sake but for that of society as well. From this point of view, education may be regarded as the modification or training of the inherent and acquired modes of response to environmental stimuli.

Instinct may be defined briefly as an inherited pattern or form of behavior. It definitely circumscribes organisms as regards behavior by imposing certain limitations of action upon them, and this is both a blessing and a curse. No animal has the capacity for many or very marked departures from a fixed type of behavior, and it would seem that nature furnishes inherently the necessary adjustments, whenever the specific reactions which an organism will have to make can be anticipated. Man, with his greater freedom from instinctive action, has, of all animals, the most latitude in behavior. The human, under compulsion of making choices to a greater degree than any other organism, has the capacity of being superior through his intellect. Biologically, intelligence is only the means of using this variability of behavior for the purpose of making useful adjustments; hence, from this same viewpoint, education constitutes the learned adaptations which one makes to the sum total of environment. Thus the goal of education, biologically, is superior adjustment and varied adaptability, with a view to fitting man more perfectly for a happy and varied existence amid the trying conditions of an increasingly complex and rapidly changing total environment.

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III. MAN THE SOCIAL BEING

YOU and I, and the people we know, all spend a great part of our lives doing things we would a little rather not do. We arise from comfortable beds when the alarm rings in the morning even though we are still sleepy. We face a day of work, which, however pleasurable, has a way of interfering with even more pleasant possibilities. The clothing we wear may not be entirely comfortable but we must keep up appearances. Often we must act in ways which are contrary, even, to our best judgment, as when we study courses which we know can be of no use to us, simply because they are fixed in the curriculum.

If we stop to consider why life is what it is we find that on every hand we are obliged, for one reason or another, to conform to laws, rules, customs and the commands or suggestions of others. Some persons are in authority over us, and others may be subject to our wishes. There seems to be a favored way for doing almost everything, and a time and place in which it must be done. This is social order. Most people accept it most of the time as a matter of course, but others, on occasion, revolt against it and wonder if life would not be much more satisfying if we could escape from restrictions and live the free and untrammelled existence of wild things. A few people have been known to discard their clothing, throw animal skins over their bodies and leave civilization behind them, hoping to make their way by their native wits as "children of Nature." The hermit may hide away in a cave on the mountain top, shunning contacts with other people. Some religious fanatics shut themselves off from the world and spend long periods in solitary contemplation of sacred things.

Such efforts to escape from society are always brief or incomplete. There can be no truly solitary existence for the human being because all that makes him ''human'' comes from association with others; as an animal, man is poorly equipped to take care of himself. He has no thick fur to protect him from cold winds, and slaying tigers to use their skins is more difficult than it may sound, especially when one has no gun. Eating herbs and berries which nature provides may sustain life, but unless one has learned from books and the lore growing out of many experiences of many persons which may be eaten and which not, he is quite likely to eat things which will make him very ill. Being very ill, it is not pleasant to have no physician at hand, and no telephone by which to call for help. If, in addition, there is no corner drug store where remedies may be had, and not even matches to help build a fire, the situation soon becomes desperate.

It is not accidental, but necessary, that all human life is group life. There are variations, to be sure, in the extent of the individual's dependence upon others, and the degree of happiness which may be had in company, but all of us must maintain some sort of working arrangement with organized humanity to get along. Such working arrangements make a complex social order necessary. A telephone is a very useless thing if it does not perform, and it only performs if some people are doing things whether they want to or not. The corner drug store would be of little help if its door were locked and its shelves empty, but it requires an elaborate system, involving many small sacrifices of the whims of many people, to put goods in the store and make them available when needed. Little, in our social scheme, can be left to chance; nearly every activity must be enforced by regulations and traditions if organized group life is to be efficient enough that individuals may survive.

It may appear from what has been said that every person reasons the whole thing out and makes innumerable decisions to limit his own desires, since only if we all do so may he have the satisfactions which social order makes possible. This is not the case; very few people stop long to think about the very involved system which we call society. Most of us accept and conform without any clear realization of what the alternatives might be. We do this because the groups of which we are members train us from infancy to accept society and its restrictions, for the most part, without question. This training of individuals is not always deliberated, for a large part of it is simply the customary treatment of growing children and the setting of example without realizing that one is being an example. The developing child learns the physical habits which enable him to walk like a human being, to eat in a fairly acceptable manner, and develops tastes for particular foods. He acquires language, gestures and mannerisms for communication with others. Seldom does he later question any of this basic equipment, except in minor details. It comes to seem "natural" for a boy brought up in our culture to speak English, to look solemn at funerals and gay at weddings, and to prefer ice cream to roasted grasshoppers; yet none of these characteristics is any more "natural" than would be their opposites if he were brought up in one of several other cultures. All are learned behavior in conformity to group standards. The person, as a behaving, thinking and feeling organism, is the product of the traditions of his group, and is shaped in continuous and active association with other members of that group.[1]

In our individualistic philosophy much is made of the unique qualities of particular persons and of the "self-made" man, but these notions can easily be carried to unrealistic extremes. Even the most peculiar and eccentric persons depart far less from cultural norms than is often supposed by superficial observers. Criminologists have pointed out that the behavior and attitudes of criminals for the most part are conforming, and their departures from social expectations are confined to a few activities and notions. They believe in loyalty to group as most of us come to believe in loyalty to other groups; in their own associations they insist upon "law and order," just as the rest of us insist upon them in our own associations; they even "rationalize" their unlawful conduct as "right," as others rationalize lawful conduct. Criminals can be ardent Democrats or Republicans, spend money foolishly on well advertised goods, and think of aggressor nations abroad as wicked. They even show pride in being "self-made" and consider themselves as "different." Many criminals even "cut corners" in their income tax returns. Not only are such divergent persons as criminals much like law-abiding people in most ways, but their few differences in attitudes and behavior can usually be traced quite easily to differences in associations, training, and "models" from those of ordinary people.[2]

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[1] E. T. Hiller, *Principles of Sociology* (New York: Harper and Brothers, 1933), Chapter I.

SOCIETY AND THE INDIVIDUAL

We must overlook many obvious things to think of any person who could be classed as human as being entirely different from all others, but it is equally unrealistic to think of all members of any group as being identical in all matters. It is in general characteristics that we are very much alike, and in particulars that we show variations. In the matter of language, one of the most obvious of common possessions of mature members of groups, it is quite true that no two members will have precisely the same vocabulary, use terms and phrases with the same shades of meaning, or have exactly the same pronunciation or tonal qualities in their voices. Yet, if language is to serve any purpose for the group or individual, there must be substantial agreement in these regards.

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[2] E. H. Sutherland, *Principles of Criminology* (Rev. ed.; Philadelphia: J. B. Lippincott Co., 1939), Chapter I.

This is also true of other characteristics of group members. There must be, for instance, essential agreement on values, morals and tastes. The first requisite of social order is consensus, not absolute or in everything, but basically and on most important things. Otherwise there can only be chaos, and none can depend upon having his essential needs cared for.

Consensus alone, however, is not sufficient to keep group life functioning. It would lead only to passive acceptance and toleration of others, not to effort and sacrifice. The additional necessary element is interdependence among group members. Whether these members realize it or not the satisfaction of their wants and needs must be possible only if they contribute to the satisfaction of wants and needs of others. Just as consensus grows out of training for mature group membership, interdependence also is largely a result of group processes. Never is it left to chance.[3]

In a colony of ants there is cooperation based on interdependence which is due to the fact that each kind of ant—queen, worker, soldier, etc.—is specialized biologically only for one function and must depend upon others for everything else. Thus, the queen ant can lay eggs, but that is all. She cannot feed herself, she cannot care for the eggs when they have been laid, she cannot nurse the larvae when the eggs have hatched, and she cannot defend herself from dangers. For all these other things she must depend upon others.[4] Nature has not, to such an extent, provided human beings with biological specializations. True, she has differentiated between the sexes so that they are naturally interdependent for reproductive purposes; and has made babies and the very old feeble so that they must depend upon others. Otherwise the functions physiologically possible for persons are about the same, and their elaborate specializations in work and play derive from social processes, growing out of traditions, laws, and regulations of various kinds, as well as from specialized training of the young for different functions.

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[3] Hiller, *op. cit.*, pp. 18-19.

[4] W. C. Allee, *Animal Aggregations* (Chicago: University of Chicago Press, 1931).

SOCIAL ADJUSTMENT

A few generations ago it was characteristic of our culture, as of others, that certain types of work or play were suitable for men and others for women, and the line thus drawn was seldom crossed. Usually vague physiological reasons were advanced if the arrangement came into question. The girl who was a ''tomboy'' was ''unnatural,'' while a boy who preferred girls' activities was considered constitutionally abnormal. Today women fight in armies beside men, and men engage in every conceivable occupation, including dressmaking and knitting. Recent years have seen women enter on an ever increasing scale into domains previously reserved for men, and the so-called double standard of morality is openly challenged on every hand. As most educators recognize now, the specialization of persons is limited only by their training and a few remaining mores which insist upon considering highly artificial lines of difference as being fixed in the nature of things.

This has not meant, however, a decline in specialization. It simply has meant that the lines which determine specialization have shifted. The economic and other rewards of life are largely for those who are narrowly specialized in one or a few lines, and it has become impossible for an expert in any field to keep fully informed or abreast the times in more than one interest due to the very bulk of knowledge and the rapid changes in all fields. The question may well be raised at present whether the trend toward specialization can go too far in group life, and the only answer is that it can if we lose sight of the need for general consensus to accompany increased interdependence. A society of experts, narrowly disciplined, can bring discord and futile controversy to the point of social paralysis if fundamental agreement is lacking. That there exists a real danger in this direction became obvious in the struggle of the American people to achieve national unity when world events brought them face to face with grave perils.

As was suggested by the reference above to the criminal and the processes which produce him, it is true that the social system which produces mature social members through the training of infants and children may err seriously in particular cases. It is also true that life conditions often change so rapidly that it would be impossible to prepare any individual in advance for all possible contingencies. Those who have lived for forty years have seen the necessity for people brought up to fit into a horse-and-buggy world to adapt to an automobile and an airplane age, an adjustment which was often far-reaching in the life patterns of individuals. It meant that things learned well in childhood were inadequate equipment for many adult adjustments, and that many choices had to be made for which there had been no preliminary training. Yet it was necessary that even in these new adjustments and choices there should be a large degree of consensus among members of the group, and this new consensus could not be left to chance. The rules for driving a horse-drawn vehicle would not cover the growing traffic of automobiles, yet it could not be left to each individual to decide upon his own "rules of the road." On such rules there had to be agreement if there were to be any orderly or safe driving for anyone.

SOCIAL CONTROL

It is because of the changes in life conditions for which members cannot go back and become trained anew, and because of the frequent failures in some particulars of the socializing process that it is necessary for every organized group to exercise social control over its members more or less deliberately.[5] If we think of the policeman as a symbol of social control we can readily recognize the double necessity from which he arises. His most spectacular work has to do with curbing dangerous and criminal behavior of those who are mistrained for social responsibilities; but most of his tasks, though less dramatic, have to do with the rules of traffic and similar regulations which channelize activity in new and changing life situations.

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[5] For good treatments of Social Control, see books of that name by L. L. Bernard (New York: The Macmillan Co., 1939); and Paul H. Landis (Philadelphia: J. B. Lippincott Co., 1939).

While the policeman well symbolizes social control he is really only a small unit in a vast and complicated network of controls. Some are governmental and political, as laws and the whole machinery for their making and enforcement. Others reside in economic arrangements and activities, ranging from advertising and salesmanship to the weekly pay envelope, all of which have coercive or directing effects on the behavior and choices of individuals. Social controls may be found in religious rituals and exhortations, in educational organization and processes, in the conduct of games, and every other phase of our common life activities. The effectiveness of controls in bringing about conformity among many individuals depends upon a number of factors, including the habits and attitudes of the individuals to be controlled: they may be trained, as are young Nazi Germans, to react mechanically to iron discipline, or, as are other groups, to think for themselves and justify authority with their own consciences. The effectiveness of control also varies with the appropriateness of the means employed; no one versed in educational history would maintain that the old ''rule of the rod'' brought about as favorable resulting activities and attitudes as the more modern and enlightened methods of classroom control. A further variable in social controls is the degree of their consistency with other controls, for since we are subjected to many controls emanating from many sources there is the likelihood that they will often be at variance in the results they try to achieve.

CONFUSION OF CONTROLS

Such confusion of controls is well exemplified in our culture by the efforts at the direction of sex conduct, one of the most difficult problems that we face in our complicated group life. The family, the church, the state, economic interests, the school, and other agencies all attempt to shape the sex patterns of the young, and as often as not they work at cross purposes. The adolescent youth may be told sternly that sex is synonymous with sin while seeing sex glorified at the same time in picture, story and song on every hand; they may learn that sex is a purchaseable commodity like other commercial goods while learning that sex is mystical and sacred; and they may be taught that wholesome sex life has much to do with physical and mental health. Out of the confusion we get about the same results that we would if we permitted and encouraged everyone to direct traffic at a busy street corner without any clear agreement on what was desired or how any desired result might be obtained. The same confusion does not exist everywhere in group life, else society would break down completely; but as one examines one field of activity after another it is clear that a real danger lurks in growing confusion among control agencies.

Any group in which there is a high degree of consensus, which is characterized by interdependence among members, and in which there is a coherent scheme of social control can function smoothly for the benefit of its members. Lacking any one of these elements, no group can long be a source of security or satisfactions for anyone. Of course all these are matters of degree and nowhere can absolute perfection be found, nor, probably, would it be desirable because it would imply a static social system. On the other hand, any approach to the other extreme, a notable lack in any of these essentials undermines social solidarity and efficiency. In our own group there is no lack of interdependence. We have gone far, and move further, in the direction of specialization in function which more and more limits the self-reliance of each group member. On the other hand, until December, 1941, at least, we were sadly lacking in consensus, even on the most fundamental things. At the same time, perhaps more than in any other culture group, there has been a growing confusion and accompanying decline in effectiveness of social control in our national life. One may point to rising rates of crime and delinquency, to corruption in politics and exploitation in economic life as indications of this; or one may take a simple problem to a number of authorities and ask for guidance, to find what a bewildering variety of answers he will get. It is not lack of proficiency in the application of control techniques which characterizes us as a people, but rather lack of agreement on what we want members of our social order to be, do, and think.

To social disorganization as it is reflected both in the statistics on social problems and the bewildering array of choices which confronts the individual there are type reactions. Some persons are inclined to a despairing and pessimistic fatalism; others to a deliberate policy of escape from reality; and still others—in our society the great majority—react with staunch optimism. For the latter group the answer to growing social self-consciousness is the parallel rise of the concept of social engineering. The underlying assumption of social engineering is that Man can, by the collective exercise of intelligence, shape his own life destiny. The problem becomes one of bringing the sum of human intelligence to bear upon the inadequacies of existing social schemes with a view to so reshaping human society that its organic parts are better co-ordinated. The proof of the working assumption, if such proof is possible, lies in the future, not in the past or present. We know that in limited realms Man has exercised a degree of control over social forces and processes, but we also know that fragmentary advances in human welfare are apt to create more problems for the whole social scheme than they solve.[6] Whether Man can eventually exercise a rational control over the whole of society has yet to be demonstrated. It is necessary, however, if we are to have any conscious effort in the direction of progress in terms of human welfare, that we accept as a starting assumption that such control is possible.

It would be tragic if we failed to take note of what we have learned in the last few years and in the years of World War I, regarding both the strength and weakness of our society. Man has no option as to whether he will be a social being or not; that is irrevocably decided for him by his very helplessness as an individual animal. Even the hardy pioneer who broke wilderness trails across the American continent carried with him his axe, gun, and Bible, symbols of his utter dependence upon the common heritage of his people. However eccentric his ideas may have seemed, he was in essential agreement with millions of other members of his group. Wherever he stopped there appeared a system of social control, often simple and direct, but essentially understandable and coherent.

EDUCATION FOR SOCIAL MEMBERSHIP

Education, from the viewpoint of society, is first of all the preparation of persons to function under the necessary conditions of organized group life. Schooling is the more formalized aspect of education, and, as is well known, much of the educative process is carried on outside the classroom and away from the jurisdiction of the professional teacher. The school cannot function independently of the whole complex of society, and, necessarily, it reflects mainly the philosophy of the world from which it draws its substance. It has been sensitive to the general trend toward specialization and in moving in that direction has contributed to the growing interdependence of group members for the satisfaction of material wants. The highly trained educated person is probably the least able to "go it alone" for any length of time. While many scholars tend to withdraw somewhat from the more commonplace fields of social interaction, they must, more than others, rely upon books, sympathetic discussion and other resources which only others functioning in society can provide.

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[6] The relationship between fragmentary and organic approaches to social problems is discussed at length by Howard W. Odum, *American Social Problems,* in the first chapter. On page 6 he says in part: "The American basis (stressing the immediate and the practical) is constantly being emphasized in the new discussions in the field of education and public policy. But again and again we learn that the American picture is of many sorts and all our problems are so inseparably interrelated that we must see the whole picture in order to work intelligently on any problem." How many educators have a realistic grasp of the "whole picture"?

Whether formal education as we know it contributes materially to consensus in the group, even on a few basic things, is open to serious question. It must be admitted that most educational policy and practice is based on an outmoded rationalistic psychology which looks upon the human individual as a self-sufficient thinking machine, who, if exposed to enough accurate knowledge, will inevitably find socially desirable answers to all problems. The "open mind," capable of reaching independent conclusions on all matters, has long been a shibboleth, and for those who are aware of the realities of organized group life, it is terrifying in its implications. Very well informed people, trained to think for themselves, have a disconcerting way of becoming out of tune with the society in which they live. The most revolutionary ideas about family and marriage, about all matters of "right" and "wrong," have come from highly educated persons who do not, however, agree among themselves. Controversies over basic principles rage in all college faculties, and in all professional organizations of the best educated people, so that often these are paralyzed as far as any possibility of effective action is concerned. A good example may be found in the discussions of programs for socialized medicine within the medical profession.

Professional educators have accepted the responsibility of educating for social membership, as witness the many pronouncements on the subject in addresses and books. This brings them face to face with the problem of achieving a balance between the ideal of the ''open mind'' and the necessity for some consensus if society is to function. No one would advocate an education designed to destroy all individual initiative nor a certain healthy amount of disagreement which appears so necessary to group progress, but more effectively than now education must help to bring about a sound and healthy uniformity of thought and feeling where our principal group values are involved. We cannot go on indefinitely as a people if we are divided on everything and agree on nothing. Formal education alone cannot make a united people for too many other influences impinge upon every individual. In our group, however, the educator is probably the most strategically placed to give the necessary leadership in this direction.

A further inescapable responsibility arises from the fact that Americans are characteristically a ''lawless'' people, in that of all peoples they are most immune from social controls due to the very confusion in those controls. Whatever solution may be found for our lack of consensus should also go far to bring about greater coherence in social controls, and thus to make them more effective in our group life. It would be very difficult to show that our great national expenditures on education have improved the quality of citizenship, and a few courses carrying such a label are very inadequate. Good citizenship must grow out of a total life experience, and education's contribution, if it is to be helpful, must be a product of the total educational experience rather than of isolated fragments of it.

The place of formal education in the whole social scheme is easier to describe in abstract terms than it is to clearly visualize. It is interesting to note that most social psychologists give very little attention to the school room process. They are more inclined to be interested in school as an experience in social adjustment, in teacher-pupil relations as problems of person-to-person interaction, than in what is ''taught.'' The school comes in for less attention from them than do the family, the neighborhood, the boyhood "gang," the motion pictures, and other experiences outside the sphere of formal education, as the significant formative experiences of youth. Because of their positions, interests, and partial isolation from group life, educators are prone to greatly overemphasize, by contrast, the place of the school in the development of persons for social membership. They are apt to think both of the school as a panacea, and as coming in for far more blame than is probably justified, for social failures.

On the other hand the task of the educator is not meaningless, and in its cumulative effect there is no doubt that schooling has important results in the shaping of the thought processes and other characteristics of a people. While the fate of civilization may not hang upon what is said and done in the classroom, always there are some potential leaders who are greatly affected by their teachers and their points of view, and in turn many of these influence the followers who come into contact with them in later years.

From the sociological point of view an adequate philosophy for American education would, first of all, recognize the inevitable social nature of man, and the extent of reliance that each individual necessarily places in organized group life. So complete is this dependence that before there can be any possibility of satisfactory enjoyment of life for the individual there must be a smoothly functioning society. The efficiency of society cannot be taken for granted for it is not fortuitous; it results, rather, from the cultivation of sufficient consensus among group members to make it possible for them to act and think in concert on the most vital matters. Before education can be made effectively to serve the needs of individuals, then, it must look to social needs even though that may mean some curtailment of individualism. Especially is this a problem in America where traditionally we have placed such extreme stress on the unique qualities of persons, often to the point of ignoring group welfare. Any effort at bringing about uniform ways of thinking soon meets with protests of "indoctrination," but it must be remembered that there is no such thing as wholly undirected thought. If persons are not directed by formal education in their thinking, they will be by other agencies in the group, and the other agencies, in all probability will have less compunction about indoctrination, and less regard for either group or individual welfare than educational institutions.

A further requisite much needed in educational philosophy is perspective so that there will not be an unrealistic exaggeration of the role of schooling in the whole context of social life. Only with such perspective is it possible to integrate the formal educative process with the many other influences which go to shape individuals for social membership, and therefore to bring about the necessary coherence among these processes to make them truly effective.

Reading List

Angell, Robert Cooley. *The Integration of American Society* (New York: McGraw-Hill, 1941).

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IV. PSYCHOLOGY AND EDUCATION

OF the laboratory sciences, psychology, which is the scientific study of human nature, has the closest relationship to education, which attempts to modify behavior in certain definite ways. Long before psychology became an experimental science, the methods and philosophy of education were influenced by the psychological theories of the day. As psychology emerged from the period in which it was speculative to the period in which it began to avail itself of the scientific method, educators found more and more of interest in psychological literature. At least half of present-day research in psychology is related directly or indirectly to education.

Of the definitions that have been proposed for psychology, one of the best is that of Aristotle, who presented the first organized treatment of the subject. For Aristotle, psychology was the study of the ''psyche,'' the functioning of the body, which he divided into three phases: vegetative functioning, the basic life process, which included digestion and the assimilation of food; animal functioning, including sensing and locomotion; and rational functioning, of which the highest type was the thinking characteristic of man. Although there are some contradictions in Aristotle regarding the nature of the psyche, it seems probable that Aristotle looked upon the psyche as activity rather than as structure. This concept would be in accord with the general trend in the field of psychology today.

Later philosophers, however, thought of the psyche as something apart from the body and identified it with ''soul.'' In this interpretation of the psyche the influence of the Christian Church is apparent. Through the work of Saint Thomas Aquinas, Aristotle became ''The Philosopher'' and his writings were interpreted in the light of Christian doctrines. For many hundreds of years, psychology was a study outside the biological sciences. It was cultivated by philosophers who wrote expositions of mental processes but who were not able to develop a large body of definite material.

In the modern period, psychology became mental philosophy, the study of the ''mind,'' which, like the soul, was often considered non-physical and distinct from the body, although parallelism with physiological processes was admitted. In this concept the influence of Descartes appears. The peculiar province of psychology was taken to be consciousness, with introspection, or self-observation of mental activities, as its special method. This was a narrowing of the field of psychology from the original definition of Aristotle, in both subject matter and method.

It was, however, when this definition of psychology was commonly accepted that philosophers took the techniques of scientific physiological experimentation and applied them to psychological problems. Wilhelm Wundt, a philosopher who had been trained in physiological methods, opened the first permanent psychological laboratory in the world in 1879. The applications of psychology to education at this time were not extensive, but it was the educators who saw implications in the development of ''the new psychology'' and enabled the science to spread and to develop. Not only were psychological laboratories founded in Germany and other parts of Europe but America, particularly, proved to be a fertile field for the new science. The rapidly developing universities of the United States provided space and funds for the new laboratories. Though the laboratories were, like psychological laboratories today, usually in an attic or a basement, still the universities gave definite space and encouragement.

In the last thirty or forty years psychology has been definitely identified with the biological sciences. In turning away from introspection as its peculiar method and consciousness as its province, it has found, first of all, a definite subject matter, and second, a greater degree of quantification. Introspective data still have their place in psychological research, but they are never taken quite so seriously as they were before the advent of behaviorism about 1912, which was a characteristic manifestation of American psychology and helped psychology to become identified with the biological sciences. Psychology now takes as its province the study of behavior rather than the study of mind, with the individual as a whole the focus of attention. Animal psychology is studied partly for its own sake but largely for the light which it throws on human activity. Between the nervous system of man and the nervous system of the other mammals are many fundamental similarities. Differences are found chiefly in the higher neural centers, such as the cerebral cortex, rather than in basic design. With animals it is possible to experiment directly on the nervous system, using operative techniques. The result has been that animal psychology has become a basic type of psychology because experiments on determining factors in behavior have become possible. Psychology is concerned not only with the behavior of the normal human adult but also with the behavior of subjects with no place in mental philosophy or Wundt's "new psychology." Present-day psychology studies the behavior of the child, the adolescent, the senescent, as well as mental and emotional deviates from the normal.

For a time there was a no-man's land between psychology, the study which emphasizes the functioning of the body as a whole, and physiology, the study centered in the functioning of the organs of the body. Intermediate between the two there has gradually developed physiological psychology, which is concerned with the ways in which the functioning of the whole affects and is affected by the functioning of the parts.

In the last century, the social studies, sociology, economics, political science, anthropology, and history, have seen great growth. The social studies are concerned with groups, while psychology is by definition concerned with individuals. Intermediate between psychology and the social sciences there has developed social psychology, concerned with the interaction between the individual and the group.

The borders of psychology are not, and cannot be, delimited exactly. Psychology is concerned with mental and physical functioning of the individual as a whole, but neither functioning can be considered in isolation. The psychologist is necessarily concerned with physiological and sociological phenomena. The new movements in psychology, like those of other sciences, have usually come with the development of new techniques. The techniques of learning experiments, of mental tests, of new methods of recording, have resulted in advances in psychology. Psychological research, especially in the twentieth century, has not been able to supply the educator complete information about the human beings who are to be educated and who are to educate, but has supplied many useful data.

Psychological research has provided tools for educational research. The pure psychologist has interpreted to the educator questions relating to learning, to individual differences, to motivation. Of the branches of applied psychology, educational psychology is the most important, both in the number of psychologists engaged and in the extent of publication.

THE DEVELOPMENT OF MODERN PSYCHOLOGY

In order to understand modern American psychology, we must now review in some detail its relation to German and other psychologies, although since its birth it has developed in a fashion quite different from present-day German psychology. German experimental psychology resulted from the union of mental philosophy and physiological psychology. In the intellectual awakening after the Middle Ages, just as in the ancient world, science began with astronomy and physics, and only after considerable development in the natural science field did there arise interest in the problem of life. By 1879, the year in which Wundt opened his psychological laboratory at Leipzig, botany and zoology had passed the descriptive and classificatory stage and had entered the age of experiment. Urged on by needs of medicine, human physiology was rapidly progressing. Weber, Helmholtz, and Fechner had already conducted important researches which psychology was to claim for its own.

Important for the future science of psychology was the status of the physiology of the nervous system. The function of the brain and other portions of the nervous system was gradually becoming better understood. Early in the nineteenth century, Bell and Magendie independently had ascertained the clear-cut separation of function of motor and sensory nerve fibers, a discovery as fundamental in the field of neurophysiology as Harvey's discovery of the circulation of the blood had been in general physiology. In 1832 Marshall Hall demonstrated the functioning of the lower neural centers in reflex action and the functioning of the higher centers, especially the cerebral cortex, in voluntary activity. In 1850 Helmholtz first measured the speed of the nervous impulse, which had been supposed to be so fast as to be practically immeasurable. His method gave times of between 50 and 100 meters a second for sensory impulses, a figure which his friend DuBois-Reymond later corrected to nearer its true figure of approximately 125 meters a second.

Using the method of extirpation of parts, Flourens had come to a fairly adequate understanding of the functions of the major divisions of the nervous system. The function of the peripheral nerves was excitation and that of the spinal cord conduction. To the cerebellum he assigned its correct function of maintenance of balance through the integration of motor impulses. He located the "vital center," or as we would say, the breathing center, in the medulla oblongata.

The cerebral lobes as a whole were concerned in perception, intelligence, and the will.

After Flourens there was a trend away from generality of functioning toward specific localization. Broca discovered the cerebral center for speech in 1861, and a decade later Fritsch and Hitzig by means of electrical stimulation of the exposed cortex demonstrated cerebral localization of motor functions. By 1876, still three years before the opening of Wundt's laboratory, the motor areas had been mapped and in the latter part of the century the sensory areas were also discovered. The neurone theory—dependent on the histological discoveries of Golgi and Cajal—did not appear until 1891, but by 1879 neurology had progressed to the point where the first experimental psychologists were ready to believe that there was an intimate connection or even ultimate identity between mental processes and happenings in the nervous system.

But physiological psychology had far more to contribute to the then fetal science than information about the nervous system. The physiology of two important senses, vision and audition, was well worked out during the nineteenth century, so well that Helmholtz' *Handbook of Physiological Optics,* first issued in 1854, was translated into English in 1925 not as a historical curiosity but as a scientific work of prime importance. Helmholtz conducted monumental researches in the field of hearing, and his piano theory of audition has adherents today. The main phenomena of the senses were described psychologically, and the five senses of Aristotle were extended to include a sixth sense, the kinesthetic sense of sensations arising in the muscles during movement. The discovery of other senses to lengthen out the list to the fifteen or twenty of today came after the inauguration of experimental psychology.

The first psychologists were also physiologists, and from the physiological laboratory they brought techniques that could be applied to problems of the mind. Fechner, singlehanded, had worked over some experiments of E. H. Weber and produced psychophysics, the attempt to find mathematical relationships between changes in the external world and changes in the resulting sensations. Fechner demonstrated that within limits the general relationship is logarithmic, and that as the physical stimulus increases in geometric ratio, the resulting sensation, measured in units of just noticeable differences, increases in arithmetic ratio. The methods of psychophysics have proved more useful than the findings, for on them depend much of the mathematical theory of mental testing.

Another source of methodology for the new science was astronomy. For several generations, astronomers had been interested in the practical problem of measuring what they termed "the personal equation," or individual differences in the speed in reacting to a stimulus. The problem was suggested by the fact that astronomers varied in reporting the time at which stars moved across the reference crosshairs in their astronomical instruments. The Hipp chronoscope, which gave the time of reaction in units of a thousandth of a second, became a standard piece of equipment in the psychological laboratory and was used in hundreds of experiments.

The psychological laboratory which Wundt established at Leipzig was the focus of the separation of psychology from philosophy on the one hand and from physiology on the other. Most of the doctorates which Wundt gave went to Germans, many of whom were instrumental in the rapid progress of the "new psychology" in that country. Among his students were more than a dozen Americans who brought experimental psychology to this country and established numerous psychological laboratories at the universities. Wundt was primarily interested in determining the laws of the normal, adult, human mind, but his pupils extended psychology by undertaking investigations in very different directions. In Germany, Kraepelin used the experimental method with the abnormal and established the classification of mental disorders which with slight modifications is still in vogue. Cattell, partly inspired by the work of Galton in England, worked on individual differences and when he returned to America gave a slant to American psychology which it has since retained. G. Stanley Hall became the American exponent of the child study movement, an ancestor of present-day child psychology. Animal psychology was largely founded in America by psychologists trained in America, but it was a direct outgrowth of Wundt's experimental studies of the mind.

In America the psychologists who were most zealous in continuing the Wundtian tradition were Titchener and his pupils. Titchener, an Englishman by birth, took his doctorate under Wundt and became professor of psychology at Cornell University. Unlike Wundt's American pupils who soon concerned themselves with problems far removed from the scope of research at Leipzig, Titchener became more Wundtian than Wundt. He proclaimed that the proper study of psychologists was consciousness, that only if psychology confined itself to the study of consciousness could it be distinguished from biology and physiology. The study of sensation was paramount in Titchener's psychology just as it had been in German psychology. His type of psychology was called structuralism or existentialism because it took the facts of mental experience as structures or existences to be investigated.

Although a number of prominent American psychologists took their degrees under Titchener, existentialism has to a considerable degree remained apart from the main stream of American psychology. Titchener seemed to feel that American psychologists with their biological orientation and their behaviorism were on the wrong tack. He was never active in the American Psychological Association but invited certain psychologists he approved to meet as ''the Experimentalists,'' a group which continues today, but more within the general current than apart from it.

Sooner or later it was inevitable that psychological thinking should be greatly influenced by the theory of evolution. The functionalist school of psychology, centered at the University of Chicago, was originated largely by John Dewey and James R. Angell and continued by Harvey Carr. It had as its cardinal doctrine the notion that mental processes have biological utility, that they have evolved just as physiological structures have evolved and that it is in their biological relationships that they must be understood. The functionalists pointed out that as the nervous system became more complex during the course of evolution, psychological processes became more complex. Mind was a tool of adaptation to the environment and had definite survival value. Through mind, said the functionalists, man was able to achieve his superiority over other animals, and only in the general biological setting could man's psychic life be understood.

Functionalism has by no means been an extreme doctrine. It accepted the introspective techniques of the older psychologists but welcomed the use of objective methods as well. Not far removed from functionalism is the dynamic psychology of R. S. Woodworth at Columbia University.

Behaviorism came as a left-wing movement directed not against the mentalistic psychology of the existentialists but rather against the functionalism with which it was in closer contact. Speaking for the animal psychologists J. B. Watson loudly proclaimed objective observation as psychology's only method and behavior as psychology's only subject matter. Only his emphasis was original, since objective methods had preceded Wundt. His chief objection to functionalism was its "mentalism," and he denied the reality of consciousness as an object of scientific investigation. Watson became acquainted with Pavlov's conditioning experiments after behaviorism was formulated, but proceeded to make the conditioned reflex the cornerstone of his system, since it afforded the first objective formulation of learning and association. Watson's experiments with children, using the methodology of animal psychology, led to wide interest in child psychology, which, however, might have developed earlier had Hall been able to carry forward his projected research institute for work with children.

Another school of psychology, psychoanalysis, developed by Sigmund Freud as a technique for treating the neuroses, is empirical but not rigidly experimental. Freud was a student of Charcot, the French psychopathologist, but psychoanalysis was his own creation. The method of psychoanalysis consists of extensive interviews with patients, in which the patient is under pledge to say everything of which he becomes conscious. Psychoanalysis is especially concerned with memories of childhood which have been forgotten. A great deal of its emphasis has been upon the place of sex motivation, but Freud himself came to recognize the importance of other motives. The role of frustration in the development of abnormal behavior, the importance of dreams in revealing conflict, the re-education of the individual as a technique of therapy, are all cardinal points of psychoanalysis and its daughter schools. Along with the methodology of psychoanalysis there came into being a psychological system. Freud extended his theory to the fields of anthropology, history, and everyday life.

Hall was one of the first American psychologists to become aware of psychoanalysis, and he invited Freud to this country for lectures. Psychoanalysis has been ridiculed by American psychologists because its concepts, such as the ego, the censor, the superego, the libido, the id, and the death instinct, seem to partake of mythology. These were no entities with which it was possible to experiment in the laboratory. Freud's method was anecdotal, to some extent, and from one or two cases he did not hesitate to advance far-reaching theories. To many American psychologists, psychoanalysis seemed a spider-web creation of fancy rather than a science of observable fact. There have been, however, a number of academic psychologists who have interested themselves in psychoanalysis. Recently the *Journal of Abnormal and Social Psychology* printed a symposium by laboratory psychologists who had been analyzed.[1] There was no general agreement as to the importance of psychoanalysis, but these psychologists who had been analyzed were convinced that psychoanalysis was attempting to deal with problems which escape direct observation in the laboratory, chiefly the problem of motivation, the central problem in all psychology.

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[1] "Symposium: Psychoanalysis as Seen by Analyzed Psychologists," *Journal of Abnormal and Social Psychology,* XXXV (January, 1940), 3-114. Continued in the March, 1940, issue.

The theories of psychoanalysis have not yet influenced educational psychology to any great degree, but its potential influence is probably large. Certainly if childhood is the all-important period for the formation of personality, as the psychoanalysts point out, then parents and educators have a graver responsibility than was believed a few generations ago. If man is a striving organism rather than a rational creature, as again the psychoanalysts have emphasized, then he must be dealt with as such. This last point emphasizes even further the necessity of a biological approach to psychological problems.

Gestalt psychology, originating in Germany in 1912, the year in which the principles of behaviorism were enunciated in America, came to the general attention of American psychologists after the close of World War I. Although comparatively few American psychologists call themselves Gestalt psychologists, its doctrines have been influential in present-day psychological thinking, and it appears in modified form in the systems known as organic psychology and organismic psychology.

Gestalt psychology was the work of three men, Wertheimer, Köhler, and Koffka, who took as their central doctrine the contention that analysis of experience into elements destroys the essential nature of the experience. A total, they said, implies organization, and when there is an organized total, the whole is greater than the sum of the parts. The first Gestalt experiments were in the field of optical illusions, which could not be understood in terms of the old atomistic psychology. The total configuration, or form, or, as they said, the *Gestalt,* of a perceived experience does not depend on the summation of sensations, since the same tune can be played in different keys and the same design can be painted in different colors. They found the sensory field to be organized by the organism itself. Their reversible figures showed that what is the figure may under certain conditions become the ground and vice versa. In the ''phi-phenomenon,'' involving the successive presentation of two stimuli such as two lines differing somewhat in position, they found perception of motion that could by no means be accounted for in terms of mere sensations. In all experience the organization of the field by the individual must be considered.

One of the chief merits of Gestalt psychology has been the research which it has stimulated. Although the studies of perception by the Gestalt psychologists gave them their working system, they soon undertook the investigation of the learning process, where they found that organization of the field of experience, or ''insight,'' was fundamental. Gestalt doctrines have been extended to cover not only phenomena in the field of psychology but also other fields of science and philosophy. Child behavior, personality, and the higher mental processes have been considered by the Gestalt psychologists with some success. Researches outside Gestalt psychology proper have contributed to its vogue. Coghill's work on the development of swimming movements in Amblystoma, in which he found a total pattern of behavior before the appearance of highly differentiated movements, is often cited in refutation of the behavioristic doctrine that all behavior consists of unlearned reflexes integrated through the mechanism of the conditioned reflex.

The main stream of American psychology continues independent of the schools which emphasize a particular point of view. The American psychologist is not as well versed in philosophy as his European colleague, to whom the controversy between the monists and the dualists remains a live issue. The American psychologist is eclectic in his systematization and experimentalist in method. First of all he seeks observed facts. He uses instruments of precision for making better and better observations, which do not depend upon the vision and audition of the moment but which are in such form that the records can be studied at leisure later. He favors the use of the motion picture camera, both at ordinary and at high speeds. His polygraphs trace several simultaneous records. The electrical phenomena of the skin and of neural action currents come in for intensive study. He seeks to measure whenever possible, believing with Thorndike that anything that exists, exists in quantity, and anything that exists in quantity can be measured. Statistics is a tool not only in mental testing but in dealing with all phenomena he can reduce to quantity.

The advances in physiology and the four psychological schools of functionalism, behaviorism, psychoanalysis, and Gestalt psychology all contribute to the prevailing biological orientation of modern psychology. Discoveries in endocrinology have shown that the chemical balance of the body is instrumental in determining the rate and course of development of the organism and the speed at which metabolism takes place in the cells. Thus certain general aspects of personality are determined. The triumphs of embryology have led the psychologist to seek phylogenetic explanations for many of the phenomena with which he deals, although he is cautious in accepting too wholeheartedly Haeckel's dictum that the development of the individual repeats the development of the race. He rejects most of the controversies between the hereditarians and the environmentalists as meaningless, since experimental embryology has demonstrated that in the development of even the simplest structures both heredity and environment are concerned. Some differences among individuals, however, may be accounted for by differences in heredity alone or by differences in environment alone, and he is interested in learned and unlearned factors in conduct.

In dealing in social psychology with the complex phenomena of living in present-day society, he supplements his experiments with information which he appropriates from sociology and anthropology. In growing away from a restricted scope of research he has enlarged the boundaries of his science and brought it into close contact with physiology on the one hand and with the social sciences on the other. Psychology, intermediate between social and natural science, is a study which readily absorbs material from other fields. It has also developed much of its own that is of interest to other sciences and much that can be applied in dealing with people, whether in medicine, business and industry, education, or even in daily life.

THE DEVELOPMENT OF EDUCATIONAL PSYCHOLOGY

To the educator concerned with his technical problems, certain phases of psychology have naturally been of more importance than others. Educational psychology did not assume its modern shape until considerable research had been performed on the nature of the learning process, the question of the transfer of training, and the measurement of individual differences. Thorndike was active in all these fields, and his massive *Educational Psychology,* published in 1910, has given the main topics considered in courses in educational psychology ever since. As one of the chief founders of animal psychology, Thorndike was indirectly responsible for behaviorism. His innovation of using animal subjects for learning problems was of importance for a psychology of learning because with animal subjects acquisition of skill is so slow and so limited that detailed observation of the ways in which it occurs becomes possible. There is, of course, a danger in generalizing from the results of observations of animals to the nature of learning in human beings. Thorndike's first emphasis upon ''trial and error'' as the basic type of learning was perhaps unfortunate, since it led to the conclusion that learning was basically blind and simply a matter of the number of repetitions.

Thorndike formulated what he called the laws of learning. In various versions these include the law of frequency, the law of recency, the law of intensity, the law of primacy, etc. By ''laws'' Thorndike meant principles facilitating learning.

Beginning with rather simple experiments conducted by a few investigators, the problem of learning has been attacked by many psychologists, both in the United States and elsewhere. Thorndike came to emphasize the law of effect as a basic principle in the acquisition of new skills. It was around the law of effect that controversy among psychologists and educators raged for three decades. The behaviorists did not like the law of effect, because, in explaining the acquisition of new modes of response as a result of pleasantness or satisfactoriness, it smacked of the mentalistic. How, they asked, could an event such as pleasantness influence a previous event, since presumably the learning consisted of changes in sequences leading up to the end result?

American psychology, however, is empirical and pragmatic. Controversies are welcomed, but chiefly as a stimulus to further research. Thorndike's law of effect has been a favorite subject of psychological experimentation. Reformulation of the law has been necessary, but the fundamental fact has resisted attack. It has been demonstrated that an animal can learn a maze even when unpleasant stimuli act as cues to the final goal. Pleasantness and satisfactoriness probably do not describe accurately that which stamps in successful types of behavior. Nevertheless, the evidence is incontrovertible that learning is not a matter of mechanical repetition, but that it follows the principle of biological advantage, that learning somehow results in better relations between an organism and some phase of its environment.

The problem of learning was not, however, introduced into psychology by Thorndike. One of the first great experiments in the field of psychology was that performed by Ebbinghaus in the latter part of the nineteenth century. Ebbinghaus used only one subject, himself. He invented the nonsense syllable as a type of material in which previous associations were few, and which lent itself admirably to the investigation of certain problems in learning. Ebbinghaus plotted the curve of forgetting, which showed that most forgetting occurs immediately after the period of learning stops.

He introduced the relearning, or saving, method of studying retention. In the saving method the time or the number of repetitions for original learning is recorded. After a period of time it is frequently impossible to test retention by the other of the two usual methods, recall and recognition. Ebbinghaus found that frequently the material could be relearned with fewer repetitions or less time than during the original learning. He found that in some cases there was a saving twenty years after the original learning. His saving method of testing retention has been a useful tool for many subsequent experiments.

The problems of learning which fall directly in the field of educational psychology are numerous. In memorizing, is it better to learn by parts or as a whole? Should time spent in studying be concentrated or distributed? What is the relation between speed of learning and retention? What is the relation of motivation to acquisition of skills or knowledge? Is recitation of value in learning? What is the effect of previous associations upon retention? And then there is the question of retroactive inhibition, the influence of activity *after* the learning period upon the retention of that which was previously learned. These and other problems have been the concern of educational psychologists for two generations. Definite answers seem to have been found for some of the questions. The modern school is less inclined to emphasize rote learning than its predecessor of a hundred years ago. The progressive school has built its educational philosophy upon the notion of the primary importance of the interests and motives of the child. The project method has harnessed children's interests to an educational program dictated by adults' concepts of what children should learn. Textbooks are more colorful and have better illustrations; classrooms are less drab; school programs are more varied and emphasize the self-expression of the child, not entirely as a result of psychological experiments but clearly reinforced by evidence from them.

The existence of a large and consistently increasing experimental literature in the psychology of learning has furnished large stores of ammunition to educational innovators.

PRE-EXPERIMENTAL EDUCATIONAL PSYCHOLOGY

The modern psychology of learning is, however, only one of the links between psychology and education, and to find the beginnings of the relationship one must go back two or three hundred years. In pre-experimental psychology there were two main and opposite trends, the associationism of Locke, Berkeley, Hume, and Condillac, and the faculty psychology, of which a chief formulator was Wolff. The doctrines of these two schools were, in general, rather sharply opposed. Associationism attempted to be rigidly empirical in its theoretical framework. It insisted that mental life came only through experience, that from basic sensations in various combinations and intensities came all the meanings of complex life. Condillac, who was probably as extreme in his associationism as any of the English associationists, influenced the educational reforms of the French Revolution.

The faculty psychology was never as definitely and logically organized as associationism. Faculty psychology as a pure doctrine had few great names, but nevertheless a variety of faculty psychology continues to be popular. In faculty psychology the mind is thought of as consisting of separate ''faculties'' or abilities, such as reasoning, willing, observing, and the like. The mind was thought of as consisting of discrete and separate capacities, which could be utilized in many different acts of the person. The natural corollary of associationism in educational practice was a large number of specific experiences. The natural corollary of faculty psychology applied to education would be to find those activities which would best develop the faculties.

Education for the faculty psychologist was a matter of mental gymnastics. The faculties could be trained, just as muscles could be trained, through appropriate types of exercise. Intensive study of Greek verbs, for example, would develop the faculty of observation because differences in the various forms of Greek verbs are small and must be observed carefully if they are to be understood. Geometry was thought to be excellent for the training of reasoning ability. The faculty psychologists also assumed that memory could be improved by training.

The old faculty psychology has been dealt a serious and probably fatal blow by the results of experimental psychology. In fact, one of the first psychologists to attack the problem experimentally was William James, who practiced memorizing poetry and concluded that practice did not result in any appreciable improvement in the ability to remember, although he admitted a possibility of improvement in methods of memorizing. The experiments of Thorndike and Woodworth on the transfer of training showed only slight positive effects, and contributed to the movement away from studies emphasized for their disciplinary value, especially Greek and Latin. Thorndike's theory of mental organization in terms of specific connections not only was in harmony with the pragmatism of James and Dewey but also was the logical descendant of English associationism, revamped and with an accumulation of experimental evidence.

THE NATURE OF INTELLIGENCE

Thorndike's theory of mental organization in terms of specific connections appears not only in his conclusions on the disciplinary value of certain subjects in the educational curriculum but also in his theory of intelligence. For Thorndike, intelligence is a matter of a large number of specific connections between stimuli and responses. Intelligence has dimensions. Other things being equal, the individual who can do the most difficult mental acts is the most intelligent. Other things being equal, the person who can do the greatest number of different tasks on a given level of difficulty is the most intelligent. Other things being equal, the person who can carry on mental activities the fastest is the most intelligent. The three dimensions of intelligence would, therefore, be altitude, extent or area, and speed.

Thorndike was not the originator of the mental test but he contributed materially to the practice of mental testing. After the work of Binet had become known in America and after the Army intelligence tests had been developed in 1917 and 1918, the measurement of individual differences in intellectual capacities proceeded rapidly. The early attempts at measurement of individual differences, such as those of Cattell and his pupils, were on an unproductive basis because, as it turned out, of their theoretical orientation. The early mental testers attempted to measure sensation, attention, perception, what they considered the simpler mental processes, and hoped that the end results would be meaningful. The tests which they developed had low reliability, little relationship to one another, and low relationship with estimates of intellectual brightness.

Binet's approach to the measurement of intelligence was entirely empirical. He had a group of children rated for brightness by their teachers. He then looked for tests which would differentiate between the bright and the dull and which with normal children showed progressive improvement in ability with age. He found that only relatively complex problems met his criteria of good tests, and so the Binet scale was born.

About 1917 the Binet technique was adapted to paper and pencil tests through the work of Otis and the psychologists in the American Army. Thorndike and others extended the use of mental tests to the public schools. His tests, based upon the notion of measuring the number of "connections" worked very well. This, however, is not necessarily a support for his theory. Thorndike found that with people who have had a common cultural background the vocabulary test has the highest relationship with other types of mental test material.

STATISTICAL METHODS IN PSYCHOLOGY

The measurement of intelligence has been only one of the examples of quantification in psychology. As any study becomes a science, it adopts a mathematical skeleton for its subject matter. As experimental psychology was coming into being, mathematical statistics was developing rapidly in England. The father of psychological statistics was really Sir Francis Galton with his problem of "regression." In his studies of heredity he noted that there was greater resemblance in various traits between groups consisting of sets of one parent and one offspring than between groups consisting of sets of two unrelated individuals. He explored this relationship graphically and asked Karl Pearson for a mathematical technique to describe the relationship between two variables. Pearson worked out the formula for the coefficient of correlation, perhaps the most useful formula in psychological measurement. On a scale which varies from −1.00 to +1.00, the coefficient of correlation gives the degree of relationship between two variables. If two sets of measurements tend to go together so that an individual who is high on one tends to be high on the other, the correlation is said to be positive and is expressed numerically as a number between 0 and +1.00. A correlation of .90, for example, would be a high positive correlation. The correlation between intelligence tests and achievement in academic work is positive, but not particularly high, since it varies from about .30 to .75. Occasionally in measurement, an inverse ratio is found, so that, as one variable increases, the second variable tends to decrease. We should expect to find a negative correlation, somewhere between 0 and −1.00, between weight and number of yards run in half a minute, provided our contestants were above a certain age, say sixteen, and were in good health. Pearson's contributions to statistics were numerous and his methods are still fundamental, although new developments using different assumptions are now coming into the field of education.

One of the early workers in statistics applied to psychology was Spearman. As early as 1904, the year in which Binet published his first scale, Spearman enunciated his famous two-factor theory of intelligence. His theory was probably misnamed. It was, first of all, a theory that there was a unitary factor, which he called *g,* underlying all intellectual abilities. This *g* factor accounted for a part of the positive correlations which Spearman said would be found between psychological tests. Other parts of the correlation were to be accounted for by factors common to small groups of tests. These were the "group factors." In addition, the variance in the test scores was to be accounted for in part by factors specific to the individual tests. Since 1904 Spearman has been energetic in stimulating research, in advocating his theory, and in adducing experimental evidence for it. Many studies have shown that psychological tests almost universally, especially when they deal with complex functions, show positive correlations. Spearman devised techniques, the most sophisticated of which was his method of tetrad differences, by which the *g* factor could be isolated. As research progressed, he found group factors increasingly important, but at no time has he rejected the notion of a general factor running through all intellectual abilities. In a sense, this was a new kind of faculty psychology, with a general intellectual faculty and special faculties, which were identified as a "preservation" factor, a "will" factor, an "oscillation" factor, and a "speed" factor.

Since 1930 the problem of analyzing the intercorrelations of a large group of tests and discovering the minimum number of factors accounting for the intercorrelation has engaged the attention of several statisticians and psychologists, including Hotelling, Kelly, and especially Thurstone. The aim of "factor analysis" is to find the primary mental abilities. Among the factors for which Thurstone finds evidence are perceptual ability, numerical ability, verbal ability, ability to handle spatial relations, memory, inductive reasoning, and deductive reasoning. The computational techniques of locating these factors are involved. The results are not always clear-cut, but already there is developing in psychological literature a new faculty psychology in which the mental abilities of individuals are being described, as the result of elaborate investigations, in terms of ability to handle language, ability to handle numerical material, ability to handle spatial material, and the like.

Factor analysis shows good promise of being valuable in educational and vocational guidance. When we find out definitely what abilities are required for various types of work and also discover how to measure these abilities, the task of educational and vocational guidance will be made much easier.

The educational psychologists have had a hand in the development of new methods of measuring academic achievement. The handwriting scale of Thorndike was an early attempt to measure an educational product. Achievement tests measuring the amount learned as the result of formal instruction are a permanent characteristic of American education. Most educational achievement tests are of the objective, or short-answer type, in which the subject is required to indicate his choice of the correct answer. Completion tests require filling in a blank. Other forms of objective tests include matching, true-false, and multiple choice.

An advantage of objective tests is that the reliability of the instruments is greatly increased. They have been found to be valid for wide ranges of material. In the standardized test, norms of attainment for pupils all over the country are ascertained, and in using a standardized test it is possible to compare the attainment of a group in one locality with the attainment of pupils all over the country. Although these tests have been criticized as being superficial, it is probable that the existence of nationwide norms of attainment has had a healthy influence on American education, especially in days when the schools are swamped with pupils and individual attention to pupils by the teachers has become increasingly difficult.

By the use of these measuring devices individualization of teaching can sometimes be effected even in large groups. The diagnostic type of educational test shows the specific weaknesses of pupils. Special attention can then be given to overcoming deficiencies.

The existence of tests of intellectual abilities which can be given to a large number of pupils at the same time enables the educational administrator to pick out the lowest group for further examination by individual tests of the Binet type. From the results of the tests, dull students may be discovered early and a curriculum planned to fit their needs. Even more important is the discovery of those who are unusually bright, since bright pupils are less apt to be recognized by teachers than are dull students. Certainly if democracy is to survive, the best brains must be trained for leadership. In discovering the best brains, psychological tests have a definite function in our society.

Considerable attention has been paid to the development of specific aptitude tests, tests of musical ability, tests of mechanical ability, tests of artistic ability. Although these tests are not as widely used as achievement and intelligence, or scholastic aptitude, tests, they nevertheless have value, especially in vocational guidance.

Another significant development in the application of quantitative methods to problems of educational psychology has been the development of means of measuring interests and attitudes. Interests may be described as likings or positive orientations toward certain types of activity. For effective educational and vocational guidance, means of measuring educational and vocational interests are useful. Tests to measure these interests have been developed and in experience have shown some validity. It is clear that interests change with age, with changes in the environment, and from chance happenings. Nevertheless, interest patterns have been found to be fairly stable after adolescence, and to have some relationship to later achievement.

The measurement of attitudes has interested a number of psychologists, and the most extensive set of attitude scales was that published by Thurstone and his collaborators a few years ago. Scales exist for the measurement of attitudes toward war, evolution, communism, Fascism, the Church, God, and it is not difficult to work out scales to measure the attitude toward almost anything. The important thing for education is not the technique of measurement of attitudes but the use of the scales in evaluating an educational program. Numerous studies have shown that attitudes do change as the result of teaching, propaganda, and such experiences, and that many of these changes are relatively permanent. There is evidence that a society which knows—or thinks it knows—what attitudes are desirable may influence the development of these attitudes in its educational program.

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HISTORICAL
BACKGROUNDS

PART II

HISTORICAL BACKGROUNDS

The European Heritage
Famous European Ideals of Education
The American Heritage
The Development of the American Educational System
Recent American Educators

V. THE EUROPEAN HERITAGE

IN any treatment of the European heritage, a starting point is inevitably found in the Greco-Roman civilization, which in a short treatise such as this, must be almost entirely considered an entity. After all, the Greeks and the Romans were affected by each other, although in this interchange the Romans were more in debt to the Greeks than the Greeks to the Romans.

The Greek was distinguished by an overpowering intellectual curiosity which drove him into an unrelenting quest of truth. He was an adept in all fields of knowledge, many of the crafts and some of the sciences, all the arts, but particularly in the art of living. The development of the individual was the teaching of Socrates, Plato, and Aristotle, a lesson which we moderns have not fully learned.

The Roman was a man of action. He was interested in and developed great ability in organization and administration, both for personal business success and for the control of a large part of the world. His chief interest lay in material things, while the Greek was concerned with rhetoric, logic, ethics, and aesthetics. *Theory* is a Greek word; *negotiation, act, fact* are from the Latin. The Greek liked *hypotheses* and *theories;* the Roman liked *conclusions.* The Greeks gave the world a splendid heritage in knowledge and the arts. The Greeks theorized and experimented in government, but were not important in world politics. The Romans founded a world policy, and, although they fought many wars, they achieved more by law than by their legions. The largest part of our scientific terminology is borrowed from the Greek; nearly all of our terms of government are of Latin origin.[1] The distinctive contributions of the Greeks and the Romans can easily be seen from the study of the dictionary.

THE HERITAGE OF GOVERNMENT AND LAW

The Greeks brought along with them the elements of democracy into their homes in the Balkan Peninsula, Asia Minor, and the Aegean Islands; there were older and contemporary civilizations—the Chinese, Egyptian, Assyrian, Hittite, and Persian, but all these were theocracies or absolute monarchies. The kings of the countries ruled by divine right, and were, therefore, infallible. They needed no parliament to enact laws; they legislated by edict. They exercised the executive, legislative, and judicial powers combined in their several persons.

From the Orient, Alexander the Great and his successors borrowed the doctrine of the Divine Right of Kings, which the Roman emperors later on adopted and which Europe retained until recent times. But the Greeks, and later, the Romans during the periods of their monarchy and republic were giving Europe a government in which the people, directly or through their duly elected representatives, exercised considerable control.

The outstanding feature of the Greco-Roman system, in contrast to the Oriental, was that in theory and largely in practice sovereignity rested with the people. The voters elected their kings, later their ephors, strategi, consuls, and other magistrates; the people conferred upon the magistrates authority (*imperium*) to discharge their several functions, and the people also held their magistrates to account for the conduct of their several offices. It is significant that at Rome the earliest special criminal court (*Quaestio de Repetundis*) was created to try magistrates on the charge of malfeasance of office.

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[1] For example: empire, dominion, city, state, sovereignty, suffrage, veto, initiative, referendum, nomination, election, candidate, and many others which will readily come to mind.

Another feature of this ancient system was the bicameral legislature, common to both the Greeks and the Romans, and inherited from prehistoric times. The smaller body was an advisory council appointed by the tribal chieftain or king, later elected directly or indirectly by the people. In Sparta this body was called the *gerousia,* in Athens, the *boule,* and in Rome, the *senate.* The words *gerousia* and *senate* indicate that the membership of the body consisted of men older, if not in years, at least in experience, for the holding of some office was usually prerequisite to the election or designation of members. This body could vote on legislative proposals, vote appropriations, levy taxes, ratify treaties, sit as a court in certain kinds of cases, and, in general, it became the prototype for the Senate of the United States in so far as functions and duties are concerned.

In the earliest times those who enjoyed complete citizenship were obliged to render military service in time of war, and expressed approval or disapproval of proposals laid before them. In other words, they possessed the referendum, and their assemblies gradually took on the appearance of large legislative bodies which voted on all sorts of measures initiated by the magistrates or sent to them by the boule or the senate. The voting powers included the selection of magistrates and in some cases (as at Rome) the review of judicial decisions.

Various Greek states as well as Rome thus had the bicameral legislature. It seemed to the Greeks to be the natural thing to create a bicameral legislature in their early attempts at federation of states. In their earliest known experiment of this sort (the Delphic Amphictyony), we notice that the component states sent to Delphi two groups of delegates, one group of such delegates having the right to debate and discuss proposals, and the other to vote on them. In the Achaean and Aetolian Leagues the idea was developed approximately to its present status, namely, one body of members representing the constituent states while the members of the other house were chosen in proportion to population.

The Greeks and the Romans showed the modern world how to use commissions in government. The board of ephors at Sparta held a combination of executive, legislative, administrative, financial, and censorial duties. At Athens the ten generals (*strategi*) constituted a commission which functioned to a large extent like the British cabinet. The various colleges of magistrates in Rome were really commissions, for the Romans, having had unsatisfactory experience with their last two kings, who proved to be tyrannical, replaced the king with two consuls who could veto each other. Colleagues in the same office often divided among themselves their several functions or the areas over which their powers extended, but many colleges governed as commissions. The important contribution of the Romans to the development of the use of commissions lay in their creating them for various specific purposes. Commissions were sent to study institutions and laws and bring back pertinent ideas; they were created to negotiate treaties, to establish colonies, to organize provinces, to take care of the food supply, to codify the laws, in a word, to solve some specific problem or to cope with some baffling situation. In the last days of the Roman Republic a commission of three men (Octavius, Antony, and Lepidus) was granted extraordinary powers in the hope that they might bring order out of chaos. For a while these men were the government.

THE HERITAGE OF LAW[2]

Roman law consisted of statutes, of the unwritten law of custom, but a large element in it consisted of the edicts of magistrates who discharged judicial functions. The edicts of the peregrine praetor were known as the *jus gentium,* and became in time a corpus of international law. The edicts of the aediles became a corpus of commercial law, to which contributions were made by the edicts of censors who tried cases in connection with contracts between the government and corporations. The greatest achievements of the Romans in law pertain to the family, private property, and contracts. Roman law is still quoted and appealed to in courts of modern times.

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[2] Cyril Bailey, *The Legacy of Rome* (Oxford: The Clarendon Press, 1923), pp. 173-207.

In the earlier days there were two principal kinds of law, the *jus civile,* reserved for Roman citizens, and the *jus gentium,* which regulated the relation of foreigners with Roman citizens. The latter gradually superseded the former, and came to be regarded as a universal code, based on the principles of justice common to all mankind. During the first three centuries of the Christian Era, the law, under the influence of philosophy, especially Stoicism, was shaped into a logical system, and thus arose jurisprudence—the philosophy of law which seeks and determines the general principles of justice resting upon the law of nature (*jus naturae*).

The reasoning of the jurists of those ages, among whom were Ulpian and Papinian, has resulted in the doctrine that "all men are created equal, that they are endowed by their Creator with certain inalienable rights, that among these are life, liberty, and the pursuit of happiness." Fallacies these may be to the logician, but they have been the inspiration which has carried men on to their present attainments in individual and social justice.

The Emperor Justinian (died 565 A.D.) sponsored the codification of Roman law which bore the title *Corpus Juris.* This code was introduced to western Europe by Irnerius who at the end of the eleventh century founded a law school at Bologna. From there it spread like a conflagration over all Europe, was everywhere studied, and became incorporated in legal systems. Except in England, Roman law is the foundation of the Western legal institutions. The Code Napoleon, the Scottish and South African legal systems, in particular, rest upon it, and certain of our Southwestern states are still affected by it as an inheritance from Spanish domination.

The Greeks and the Romans showed their successors how to solve (or how not to solve) many problems which are confronting the modern world. The Greeks attempted in a *quasi* League of Nations to maintain peace, and the constitution of the now defunct League of Nations does not represent much advance. Athens recovered from a most desperate depression after the Persian War largely by a sort of Public Works Administration projects continued for over a generation, financed by plundering Persian territory. The Greeks and the Romans found some relief for the poor and unemployed by establishing them in colonies. The Roman experiment in helping the poor directly through a food dole ultimately brought disaster to the state. The Romans tried all kinds of taxation known today, including the income tax, inheritance, poll, sales, occupation, and severance taxes. The Roman Empire in the West finally crumbled after seven centuries of existence as an empire, but some cities which were founded by Romans continued to live under the ancient Roman charters with only slight changes for many centuries—in France, for example, to the very eve of the French Revolution. Both the Greeks and the Romans experimented with the doctrine of the balance of power in international relations, and abandoned it as being useless in maintaining peace.

THE HERITAGE OF PHILOSOPHY

The Greeks gave Europe several philosophical systems which have survived in large measure. Some of these demand discussion, but they will not be treated in the chronological order of their development. Epicureanism, in its original form, taught that happiness was to be attained through the pursuit of simple, natural pleasures. A prospective pleasure was always to be tested by the amount of possible pain which might be consequent upon its indulgence. The followers of Epicurus soon discarded this feature of the system, and pursued all pleasures with avidity and lack of discrimination, so that Epicureanism soon degenerated into hedonism, a philosophy of life followed by large numbers who seek happiness in pleasures to the point of self-indulgence. An incentive to the *carpe diem* teaching of the hedonistic successors of Epicurus was their semi-atheism. Epicurus taught that the gods created the universe, set universal laws into motion, and then retired to pursue their own pleasures, deaf forever afterward to the anguished cries and prayers of men. Creation itself was limited to the creation of atoms and elements, and the whole world, and all it contains, whether animate or inanimate, results from the fortuitous combination of these atoms. There could be no soul, no surviving part, for the soul atoms, as well as body atoms, entered at death into other combinations. It is not surprising that, under the influence of such teaching, men adopted the motto, "Let us live today, for tomorrow we die."

Epicureanism originally was individualistic, and so it has largely remained, but Herbert Spencer, who had borrowed from Mill, and he from Bentham, adapted it to man's relations to his fellow men. He says:

> The pursuit of individual happiness within those limits prescribed by social conditions is the first requisite to the attainment of the greatest general happiness.
>
> The adequately egoistic individual retains those powers which make altruistic acts possible. The person who is inadequately egoistic loses more or less of his ability to be altruistic.[3]

The first famous Cynic was the well known Diogenes who went about looking for a MAN. The Cynics were the tramps and hitch-hikers of the ancient world, men with long beards, unkempt hair, bare feet, dirty, and shiftless. The insignia of the order were wallet and heavy stick. Whether Christianity could have developed asceticism without the example of the Cynics can not be determined, but the Cynics were the predecessors of the Christian orders which renounced the world. They sought wisdom, self-sufficiency, truth, frankness, and freedom. In the quest of this quintuple goal they renounced wealth, pleasure, fame, position, learning, and all the comforts and conventions of the world. The Cynic's cloak and stick were adopted from the equipment of Hercules: the Cynic patterned after that hero's homeless, wandering life, and like him, went about warring upon shams. Cynicism lasted as an institution for seven centuries among the Greeks. Its influence has survived among a few stout souls like Carlyle and George Bernard Shaw who brutally expose shams without sparing the feelings of their victims. Its contribution to French and American political thought is important. Civilization, the Cynic said, is bad, because it hinders us in attaining freedom, and this hindrance comes about because civilization is unnatural; we must return to nature, for all men by nature are free. This teaching found a response in the heart of Rousseau, and contributed to a philosophy which influenced Jefferson, Madison, and other Fathers of our Country.

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[3] Herbert Spencer, *The Principles of Ethics* (New York: Appleton, 1897), I, 190.

The Stoics were the pre-Christian pastors or shepherds of the soul, visiting the distressed and offering them comfort. "No one can wrong me," says Epictetus, "unless I think I am wronged." So it is not events, or anything outside of ourselves, that can harm or disturb us, but the judgments formed thereon. The good life is the one lived in accordance with Universal Law. Man's reason is a spark of God, and should be obeyed. By the proper use of reason, man forms correct judgments, and thus can attain happiness, when he once realizes that ill health, poverty, and all seeming evils lose their power to harm him. It was a system which was congenial to the icy, hard nature of the Romans, and which inspired several Roman writers, notably Seneca and Marcus Aurelius, the philosopher-emperor.

Stoicism was one of the important ancient religions. The Stoics advocated prayer which should not consist of requests for petty things, but it should be communion with God. The only thing that one needs to request is wisdom, for with it man can find his way to serenity and happiness.

Certain doctrines of the Stoics were congenial to Christian teachings: that our reactions to external circumstances can be controlled by reason; the interpretation of evil as a means of developing higher moral qualities; the doctrine of perfectionism which reappears in some branches of the Christian Church, and was taught especially by Wesley; the doctrine of submission to the Universal Law which reminds one of sermons in which congregations are exhorted to submit to the will of God.

The aftermath of great wars is often an intellectual revolt against established tradition and old landmarks. Such a revolt appeared in Greece subsequent to the Persian invasion under Xerxes. Aristophanes, dramatist and arch conservative of the period of the Peloponnesian War, says of the youth of his time:

> The ancient disciplines have been relaxed. The youth are insolent to their elders; religion is derided; all are animated by the desire to make money and spend it in sensual enjoyment. Intellectual pursuits lead to immorality.

The Sophists were leaders of the new movement. No one, they argued, had constructed a satisfactory cosmogony; the early thinkers had shown that the mind of man is fallible, and the senses deceive the reason. Knowledge then must depend upon the individual thinker; what seems true to him is true for him; there is no objective truth, but only subjective opinion. ''Man is the measure of all things,'' Protagoras taught—that is to say, the individual is a law to himself in the matters of knowledge. From here it is only a short step to the view that man is a law to himself in matters of conduct; what is right to one man may appear to another to be wrong; one's opinion on conduct is as good as another's, so there is no universal right and wrong. Moral conventions represent merely the will of those who have the power to enact statutes or to impose their patterns of conduct upon society. These views of the Sophists are reflected in Plato's Dialogues in the words of such young speakers as Thrasymachus, Callicles, Polus, and Euthydemus.

Sophistry was a rationalistic reaction against authority and tradition. The substance of its teaching was the relativity of all spiritual, moral, and material values. This sort of thinking often appears after a great war which causes men to doubt the ability of the human mind to build a good civilization and to solve such baffling problems as peace and social justice among men. It has had a recrudescence since World War I, and H. L. Mencken, George Nathan, and many others have divided the mantle of the ancient prophet Protagoras.

In the fourth century B.C. near the city of Athens, in a place known as ''the Academy,'' a group of men undertook to found what may be called the first institute of scientific research. Their avowed purpose was to know the truth about the world, and especially about human society. This movement (humanism) rested in the hypothesis that man possesses the ability to know and to understand himself, to discern the better or worse in human nature, and had for its goal the discovery of that knowledge which will allow man to construct the optimum social order.

The leader of the group was Plato (428-347 B. C.), whose writings for centuries have strangely fascinated men of the Western world. To some these writings have been truth, to others lies, but to all they have been the source of keen interest and fresh inspiration.

The name of Plato is inextricably connected with that of Socrates. We cannot separate with certainty the teachings of these two men who bore to each other the relation of pupil to teacher. It is sufficient to regard the Socrates that Plato knew, the Socrates so beautifully characterized by Plato, as the source of much of Plato's inspiration. A portrait of this Socrates will carry us far toward the representation of the ideal man in Plato's philosophy, and not merely the ideal man, but the ideal teacher as well.

This Socrates of the dialogues was a man devoted above all else to truth. His whole life was spent in arousing dissatisfaction with the lazy man's unquestioning acceptance of the sayings of poet and Sophist. The "Socratic method," as it has been called, makes of the teacher a stern seeker of truth. He asks the students questions, usually questions of definitions at first, and then he proceeds to show by argument the inadequacies and the confusions in the replies. These students, the young men of Athens, are often the mouthpieces of famous Sophists they have heard, and the refutations are the refutations of the pretended wisdom of the day. With an air of ignorance, or "Socratic irony," Socrates ridiculed this superficial knowledge, claiming greater wisdom for the reason that he knew his own insufficiencies. The teachers of Greece at this time were the Sophist, the poet, and the naturalistic philosopher. Socrates attacked them all. The Sophists taught primarily the art of public speaking and a skepticism of scientific knowledge. For them a clever argument was the supreme achievement; truth for its own sake was nothing. The poet, especially Homer, was memorized and quoted as authority, no matter whether the saying be wise or foolish. The naturalistic philosopher assumed the power of explaining the whole universe in terms of earth and air, fire and water, and some dynamic force, whether the love and hate of Empedocles or the downward pull of Democritus. These men, though professing to seek the truth, had little of practical wisdom to apply to man. So Socrates denounced them all as too dogmatic. He never tired of urging people to think for themselves. He was the self-styled "gad-fly" of the Athenians. And it gained him a martyrdom; for he was put to death by the people whom he had tried to teach.

Plato hated democracy on account of the death of his teacher and friend, Socrates, through the verdict of a large and unreasoning jury which, no doubt, represented the general attitude towards Socrates. Many persons had been exposed to ridicule by Socrates who by entangling them in argument had exposed their ignorance. And these persons paid little attention to the merit of the charges brought against Socrates, but saw in his trial a fine opportunity to pay him back. Plato felt that a democracy is practically synonymous with ochlocracy, the government by a mob which casts away reason, and blindly follows now one whim, now another. He could not conceive of a democracy guided by reason for he lived in a state where only a small proportion of the population was educated, and a large part of the people were the submerged poor or slaves who appeared to him unfitted for and incapable of assuming a share in government. He advocated an aristocracy as being the best form of government, but it was to be an aristocracy in the literal sense of the word, where the best qualified should be permitted to govern. His best known dialogues, the *Republic* and the *Laws* set forth his views on politics and education, and constitute one of several well known utopias. Plato's views on education are set forth in chapter VI, but it may be stated here that the main object of this long training was to prepare rulers. Plato would have been horrified at the American custom of permitting anyone to hold high office who is able to be nominated and elected, irrespective of previous public experience and proof of his wisdom, justice, and honesty.

A state may fall to one of several levels below this ideal system,[4] and in his comments on these stages of degeneration Plato exhibits a keen perspective of human nature and of politics. There is a timocracy, he says, where office holders are ambitious for themselves. An ambitious statesman, if shrewd, will advocate the same measures as the wise statesman, since what will promote the welfare of the state will bring honor to him. But most office holders are not so shrewd. They are more anxious about their own re-election or promotion than about promoting the welfare of the whole state, and so they listen to groups and minorities and try to avoid incurring the ill will of any of them. Many questions are not debated and settled from consideration of what is right, and there are indeed few statesmen who exhibit the courage to take a stand on what is best for the whole state and be willing to face a group of voters who disagree with their position. The ambitious individual is more anxious to do something for himself than to have it done by somebody else, although that person is better qualified for the task.

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[4] William D. Hyde, *The Five Great Philosophies of Life* (New York: The Macmillan Company, 1920), pp. 443 *et seq.*

Rivalry for honor and glory soon reveals the fact that honors and offices can be most easily acquired through powerful backing or through the power of money. When a powerful group controls a government, either directly, or through those who submit to its behests, that government is an oligarchy—a government of the few, by the few, and for the few.

The next lower level is Plato's conception of democracy which has already been discussed. He could not conceive of a government by the best qualified men chosen by a people of sound judgment—an ideal form of government never fully attainable, but one which Americans strongly believe is worth striving for, and for which they are striving.

The kind of government a people has, Plato hints, depends upon the people and not upon the kind of constitution it has, for one observes a large degree of democracy under a limited monarchy, and that written constitutions do not prevent the establishment of oligarchies and dictatorships. Nor is any specific form of government a guarantee of peace, for, Plato concludes, international quarrelings and wars are likely to continue under all kinds of government until international relations are conducted on the basis of the virtues.

The task which Aristotle (384-322 B. C.)[5] set himself was that of writing the first encyclopedia. He collected all documents and writings available. His assistants and pupils collected materials from which he wrote the constitutions of one hundred and fifty-eight states, his works on biology and other branches of natural science. His division of subjects is similar to that which we preserve in our present day curricula: into the category of the natural sciences he placed Physics, Meteorology, Zoology, Physiology, and into the sciences of man he placed Rhetoric, Politics, Ethics, and Aesthetics. On Astronomy, Geography, Music, and Medicine none of his works are extant, although he was a practitioner of medicine. He undoubtedly labored in these fields for many problems he gave his students have survived the ravages of time. Mathematicians still revere Aristotle for his treatise on the nature of assumptions. His embryology of the chick is still good. The catholicity of his interests is indicated by his extant *Poetics,* which is still used as a reference book. His Constitution of Athens, long lost, was recovered about fifty years ago buried in the sands of Egypt. A thrifty housewife had used the backs of the pages for her household accounts.

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[5] *Vid.* William Romaine Newbold, "The Spell of Aristotle," *University of Pennsylvania Lectures for 1914-1915* (Philadelphia: University of Pennsylvania Press, 1915), pp. 500 ff.

In philosophy, as we think of it today, Aristotle made two original contributions: logic and metaphysics. Logic, dealing as it does with the rules of argumentation, had fascinated the Greeks, as is seen in the dialogues of Plato, and had been used by the Sophists to "make the worse cause appear the better." Aristotle carefully analyzed thought, and formulated rules for inductive and deductive reasoning, which were not materially altered or added to before Francis Bacon. Metaphysics (literally, "after the physics"), meant to Aristotle the study of "First Philosophy," a combination of scientific axioms, natural laws, and speculative theories.

After Justinian closed the pagan schools of philosophy at Athens (529 A.D.), Aristotle was read by only a few men in Europe, and to them he gave no stimulus to independent thought. In the seventh century the Mohammedans, passing along the northern coast of Africa, and possessing Spain, conquered nearly half of the civilized world. The Arabs were an intelligent race who seized upon not only material but also intellectual wealth, and avidly translated the treasures of the latter into the Arabic. From Arabic translations of Aristotle

Latin versions were made, and in time these were improved upon by translations from the Greek originals. These new translations were made by professors at the University of Paris, and were soon known and studied throughout Europe. Aristotle's paramount popularity was due to two factors: first, because it was discovered that his philosophy was not incompatible with the teachings of the Church—nay, more, it was regarded as amplifying and supporting Christian theology; second, when thinkers became acquainted with Aristotle's method, they were fired with the desire to extend knowledge to its furthest bounds. And so, for one reason or for the other, Aristotle for several centuries was THE PHILOSOPHER.

Aristotle was not a dreamer of dreams, not a man who had his head in the clouds. He was primarily pragmatic. He inherited a considerable fortune, he associated with kings and princes, and believed that a university professor could wear short hair and clothes of the latest cut.

Man is a gregarious animal, and, therefore, Aristotle thinks, any life that is worthy of a man should be social in nature.[6] His first doctrine, then, is that each person should work for worthy ends which contribute to social progress. A man is entitled to such tools as will enable him best to attain that end, especially friends, wealth, social and political influence. He warns, however, that the means to the end should not be confused with the ends and should not be sought as ends in themselves. Wealth and comforts, even political influence, may be properly sought for, not for themselves, but as means to worthy ends, and they should be sought in such amounts, and no more, as help in attaining that end.

The virtues cannot be learned out of a book, but must be acquired by practice as in the case of every art, and like the arts, e.g., piano playing, they are not really ours until they become fixed habits. We become ship builders by building ships, and harpists by playing the harp. And so by doing just acts we become just, and by doing acts of self-control we acquire self-control.

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[6] Hyde, *op. cit.,* pp. 176-208.

Greek philosophy in its last phase passed from an ethical to a religious or theosophic basis. The Stoic philosopher had been recognized as a spiritual guide. He was appealed to for advice on difficult moral problems, he was called in at the death-bed to give consolation. His discourses were much like modern sermons.

The loss of national freedom, the prevalent feeling of defeatism and despair of the post-Alexandrine and Roman eras turned men's minds to spiritual things. People had an awareness of sin and human insufficiency, and sought consolation in the bosom of Eastern religions which had spread over the Roman world and had gained adherents and wealth. Philo Judaeus and others attempted to combine or to reconcile Eastern and Western thought. The Greeks made their contribution in Neo-Pythagoreanism and Neo-Platonism.

Neo-Platonism is a religious philosophy which emphasizes the consciousness of sin and evil and the need of salvation. Plotinus, its high priest (204-269 A.D.), taught that evil is due to the domination of the "lower elements." Plato had taught that the lower elements should be subordinated: Plotinus held that they should be exterminated. He was ashamed of his body, never mentioned his kinsmen, and forgot his birthday. Intelligence, being of a higher order than the flesh, is not to be disdained, but is to be regarded as a channel through which one might pass to still higher planes. No mere intellectual processes, however, can bring us into intimate contact with God (which is salvation), but the ultimate means to be employed is mystic feeling (faith).

Several cults (those of Osiris, Isis, Cybele, Mithras) were formidable rivals of Christianity, but of these rival cults, Neo-Platonism made the strongest and widest appeal to thinking men. For a moment paganism seemed to have a chance under Emperor Julian (died 363 A.D.), but the attempt came to naught, and the curtain was rung down on pagan philosophy when Justinian in 529 closed the Academy at Athens and exiled the philosophers.

CHRISTIANITY

Christianity is a religion different in many respects from any the world had yet beheld. Other cults had taught certain duties to the gods, but chiefly the performance of certain rites. They had also taught that the gods could be bargained with, cajoled, and even bribed, and that they were to be feared rather than loved. Many practices believed to be acceptable as acts of worship were immoral, so that in many cults religion and morality were pulling at the opposite ends of the rope. Christianity, as well as Judaism, grounded morality in religion. God is the creator and ruler of the universe, the father of mankind, who loves his children, and solicits their love, demands of them a righteous life, and offers them a happy future state if they will only have faith in him. The concepts of Satan, angels, and demons, of a future millennium, of the condemnation of the wicked to torment, and of atonement were some of the Jewish inheritances which left a lasting impress on Christian doctrines; some of these are probably of Mesopotamian or Persian origin.

Both Jew and Christian, being monotheists, refused to worship the Roman Emperor, and both were conscientious objectors to service in the Roman army. For these reasons they were regarded by the Romans as undesirable citizens. There was not much chance that Judaism would spread after Titus captured Jerusalem (70 A.D.), but Christianity was spreading rapidly in spite of the fact that, for the reasons stated, it was not one of the religions which could be legally practiced in the Roman Empire. Constantine lifted the ban, exempted church property from taxation, and became the first powerful champion of the Church.

As Christianity spread over the ancient world, it encountered the close scrutiny of both Greeks and Romans, and each made his contribution according to his nature. The Greek, fond of speculation and analysis, interested himself in creeds, dogmas, definitions, in orthodoxy and heresies, helped the Church in architecture and decorations, and supplied it with theological and ecclesiastical terminology.[7]

The Roman too gave the Church the benefit of his genius and experience in organization, government, and law. The Roman, legalistically minded and well acquainted with court procedure, developed the idea of Christ as an advocate (Latin for ''lawyer'') or mediator.

Christianity reflects the influence of both Jewish and Greek ethics. Hatch shows that Jewish ethics reflected the rule of the oriental sheik, the paymaster, and judge of his subjects. The idea of wages for work done, of retributive justice, of atonement for sin, of resurrection of the body are Jewish inheritances. Greco-Roman ethics was based upon the civic life and government of the city. By the fourth century, Christian faith was reconciled to Hellenic thought, and the Roman empire had largely accepted the Christian faith.

In the course of time came the Reformations which arose from protests against certain doctrines, but chiefly against certain practices and abuses of organization. The central teachings, however, retained their pristine vigor. Christianity has been, and is still, a vital force because it does not invite men to believe in an ''idea'' but in a person. ''The Word was made flesh and dwelt amongst us'' is fundamental to the system and sets it apart from other religions. Christianity has emancipated and glorified womankind, spread the idea of the brotherhood of man, and of the pricess value of the individual—doctrines incompatible with totalitarianism. Countless millions have found comfort, hope, and inspiration from it, such as mankind has never been able to find elsewhere.

THE HERITAGE OF SCIENCE

Some of the early Greek thinkers by pure induction had stated principles crudely anticipatory of the nebular hypothesis, the conservation of matter, and the survival of the fittest. Empedocles (495-430 B.C.) introduced the idea of elements; Leucippus and Democritus, a generation later, assumed the division of matter into atoms which move in void (vacuum), and which are controlled by purely physical forces. The atomic theory was denounced in some quarters, then as later, as materialistic, atheistic, and therefore demoralizing. Greek thought was more prone to agree with Anaxagoras (died 428 B.C.), the teacher of Socrates, who maintained that matter was controlled by an infinite and omniscient Intelligence. Whether this Intelligence resided within the atom, or without, was violently disputed.

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[7] Such terms as ecclesiastic, bishop, priest, deacon, dean, monk, dogma, orthodoxy, heresy, and many others, are of Greek origin.

Earlier mathematical studies were collected by Euclid (Eucleides) of Alexandria (*circa* 300 B.C.). His chief work, the *Elements,* includes algebra and theory of numbers, but is best known for its geometry which is still studied in our schools with few modifications. Geometry (literally, land measurement) arose from the need of surveying and marking the limited, but valuable, areas of arable land along the Nile, and from the Egyptians the Greeks received the incentive to engage in philosophical speculation and scientific study.

Archimedes of Syracuse (287-212 B.C.) was a physicist, an experimenter, a master of applied science, and a mathematician. His contributions were in solid geometry, in anticipating the principle of integral calculus, and he reveals a command of the principles of higher algebra. In the realm of physics he discovered a means of computing the specific gravity of objects and the center of gravity of complex forms. He was famous for his inventions, which included engines for throwing large missiles, the sun glass, derricks, and hoists. He or others made use of water power and compressed air, levers, screws, and cogged wheels, and invented water-mills, washing-machines, and automatic door-openers. They went so far as to build an automatic theater in which robots performed their parts in five-act plays. There was as elevator in Nero's palace, the power for which was furnished by slaves in a treadmill, and another in the lighthouse at Pharos. The cheapness of labor, however, furnished no incentive to invent labor-saving devices, or to produce them in quantity.

Eratosthenes (275-195 B.C.), head of the library at Alexandria, measured the circumference of the earth. He learned that on a certain day of the year (summer solstice) the sun shone directly into a well located up the Nile river at a distance of 600 miles. At Alexandria he set up a sun dial and computed the acute angle of the sun from that point on the same day. With this angle and the base of the right triangle he computed the circumference of the earth, but due to inaccurate instruments and false assumptions, his result was too large by about 300 miles. Meton had already computed the length of the year, and had made an error of only one-half an hour. Eratosthenes also compiled a geography in which he announced his belief that one might reach the Orient by sailing west across the Atlantic. His contemporary, Aristarchus, discovered the sun had many times the volume of the earth, and announced that the earth revolves in a circle around the sun. This heliocentric theory was too brilliant for acceptance, and was rejected in favor of the Ptolemaic system. Claudius Ptolemy (*fl.* second century, A.D.) wrote a ponderous work on music, but is better known for his vast compilation of astronomical knowledge. He borrowed largely from Hipparchus who had invented trigonometry and had catalogued over five thousand stars. The title of Ptolemy's work is *He Megiste Syntaxis*. This was translated into Arabic and was known as *Almagest* and remained the authoritative work in astronomy until Copernicus (died 1543).

Aristotle was the foremost zoologist among the Greeks. Many of his statements have been proven false, but his methods of study were those of a scientist, for he collected animals, dissected them, studied their anatomy, and also observed their habits. The Ptolemies maintained a zoological garden at Alexandria. Aristotle saw evolution, not of organic nature, but of the creative power of nature, for he thought that nature created the lowest forms of life, then gradually proceeded to the invention of animals and finally to man.

Theophrastus continued in his *Plants* the botanical studies begun by his teacher Aristotle, but little advance was made in either zoology or botany beyond the works of these two men, and they long continued to be the chief authorities in these two fields. The medicinal values of plants, however, were further studied, and the practical values of a limited number of animals and plants in agriculture, horticulture, and stock-breeding commanded interest. All of the books in these fields have been lost with the exception of a few fragments preserved in the *Geoponica,* published in the tenth century A.D.

Primitive man generally believed that illness was a visitation in recompense for sin. Hippocrates (460-377 B.C.) was called the father of medicine because he believed that ''Every illness has a natural cause.'' He laid great stress on diet, but was ready to use drugs or surgery when necessary. The famous oath of Hippocrates set high ethical standards for the profession of medicine, and is still subscribed to by the graduates of some medical schools. The Greeks had early discovered that certain mineral hot springs were of value in the treatment of certain ailments, and they developed hydrotherapy to a degree which was not known again for many centuries. The physician of the Emperor Augustus brought his patient through a siege of typhoid fever by careful diet, nursing, and wrapping the patient in wet sheets. The Greeks laid great stress on hygiene, bathing, and exercise. In Egypt, Greek physicians expelled from their minds their scruples against dissection and even vivisection, as they became acquainted with Egyptian embalming. The result was a great advance in physiology and anatomy. Surgical operations could be performed without pain, for mandragora was used as an anesthetic. The leading physician of the post-Alexandrian age was Herophilus. He discovered that the brain is the seat of the mind; the two kinds of nerves—motor and sensory; the value of pulsation; that arteries convey blood from the heart to all parts of the body, whereas previously it was believed that arteries were air ducts. This last discovery was too far in advance of his time to meet with general acceptance, and physicians generally held to the earlier belief in regard to the function of arteries.

The ancient textbook which has probably been in wider use than even the geometry of Euclid is the grammar of Dionysius Thrax (second century B.C.). This book was translated into Latin and in later times into various European vernaculars. Some grammars to this day define a verb as "a word which denotes action, being, or state." This is the definition of the verb in the original edition of Dionysius' work.

The first important Latin dictionary was written in the time of Augustus. This dictionary was copied, revised, and enlarged in subsequent centuries, and is the direct ancestor of or the model for our present dictionaries. Our encyclopedias also hark back to the labors of Varro, Pliny, Photius, and others. Callimachus (died about 240 B.C.), head of the library at Alexandria, founded library science.

THE CONTRIBUTION OF THE ARABS

The Arabs were borrowers and transmitters of knowledge and skills. From India they borrowed the Hindu, now known as the Hindu-Arabic, system of numerals. From Babylonia and Egypt they borrowed mathematics and astronomy. From the Greeks they borrowed science, mathematics, medicine, and botany. Some of their art, such as the ribbed, transversal vaulting, and perhaps cloissoné enamel, the Arabs probably borrowed from Persia. The Arabs cared little for Greek poetry or history; they were searching for information. The Greeks too often had been contented with theories and generalizations. The Arabs searched for concrete, usable facts. For example, in astronomy they accepted the theories of Claudius Ptolemy, but they made their own catalogues of stars, and their own measurements. They made continuous careful observations through several years at different stations. One scientist collected mineralogical specimens for forty years, and his tables of their specific weights are correct. Chemistry, which the Greeks disdained, was seized upon with avidity by the Arabs who gave the world certain processes, such as distillation and filtration, and certain chemicals, such as alcohol (an Arabic word), nitric and sulfuric acids, some alkalies (another Arabic word), and the salts of a few elements.

The Renaissance in Italy was a rediscovery of classical literature, but the principal stimulus to the study of science and mathematics came from the Arabs of Spain who had exhibited toleration toward both Christian and Jew. The influx of students into Spain lasted until the Moors were expelled. Scholars, both Arab, Italian, French, and other nationals were spreading this learning through Europe and giving great impetus to universities. Gerard of Cremona translated some sixty works including the *Almagest.* Algorism, a system of counting based on the decimal system and zero, translated from the Arabic about 1200 A.D., swept over Europe and largely displaced the abacus. Many common drugs, exclusive of recent synthetic preparations, belong to Arabic medicine. The best medical schools for several centuries offered instruction in Arabic medicine and surgery. The nautical academy at Cape Saint Vincent (Portugal) under Arab and Jewish teachers prepared Vasco da Gama for his voyages. Columbus steered his course by the *Ephemerides* based on the astronomical tables of Al-Batani. The age of discovery ushered in new industrial and commercial activity. Certain centers along the Mediterranean became prosperous, men attained leisure, and with leisure came an interest in culture, and an advance in civilization. Provence, Naples, and Sicily reflected an efflorescence of culture under Moorish stimulus which induced robber-barons to bathe themselves, to dress elegantly, and to enjoy poetry and music. Women joined as equals in the artistic and intellectual pursuits of men. This influence reached its height under Frederick II (1220-1250), whose court was the center of culture and beauty and who established universities in Naples, Messina, and Padua. There was an intercourse between Norman England and Norman Sicily through which humanism reached England. In England and Ireland had appeared such liberals and modernists as Archbishop Theodore, Bede, Alcuin, and Egbert who promulgated a taste for Latin authors. Later came John Erigena, who questioned certain church dogmas, and Peter Abelard, who proclaimed that reason was the supreme and final authority. The Church opposed this new movement, stamping its leaders as Epicureans and philosophic atheists. Adherents of this movement are called the Ghibellines.

THE HERITAGE OF LITERATURE

The Greco-Roman literary heritage is valuable in three aspects for: first, it constitutes a record of what men have been thinking from the ninth century before Christ down to modern times; second, it is a corpus of classics canonized by the admiration of readers and critics through many centuries; and third, we have revealed before our eyes the development of many species of writing from their embryonic to those highly developed forms which modern peoples have adopted with few modifications to suit their needs and their tastes. It has been claimed that modern man has developed only two species of writing—the essay and journalism, but the indebtedness of the essay to ancient satire can easily be discerned, and writers like Xenophon were certainly the literary forbears of the modern columnist, even though Xenophon never heard of a newspaper.

The Greeks did not acquire an alphabet until about 750 or 700 B.C., so that before that time they composed in verse, which is easily transmitted from generation to generation by oral tradition. Prose made its appearance after the acquisition of the alphabet, and for a time after that writers were classified as ''verse-makers'' (*epopoioi*) or ''word-writers'' (*logographoi*) according to their choice of verse or prose[8] as a vehicle of expression. Writers in certain fields experimented with both, and finally wrote exclusively in prose. Thus satire first appeared in verse, then in a mixture of verse and prose, and finally in prose. The earliest novels in prose dealt with the adventure of a hero, so epic poetry may be considered as the first attempt at writing in that field. It is noteworthy that the French critic Artand states that Walter Scott belongs to the category of epic writers. We can hardly imagine scientific treatises written in verse, but the first Greek scientific thinkers wrote in verse, and the Roman Lucretius attempted to revive that custom.

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[8] The terms "verse" and "prose" are unsatisfactory because they refer only to external characteristics. "Verse" indicates that the writer composed a line and then "turned" to start the next line, while in prose he kept "moving forward."

Before the era of the printing press, there were changes in popular literary tastes. Epic poetry had its vogue, and was for a time that species of literature which the great majority of the public admired. Then lyric poetry enjoyed popularity, and, when Athens was in the acme of her glory, drama, both tragedy and comedy, were known to and admired by the general public. We observe that in prose, rhetoric (oratory) became a great passion, and was very popular for several centuries. Finally, in the ancient world the story became popular, and remained popular through the centuries until drama in the Elizabethan period again acquired a position of widespread interest.

Stoddard calls attention to a tendency in the development of writing[9]—a tendency which reflects the changing tastes and interests of man as he progresses in civilization. At first man is capable only of enjoying external, physical, and objective qualities, but later on his interest turns to the internal, intellectual, moral, and subjective qualities. Epic poetry and the first Greek novels certainly deal with the first set of qualities. Due to the influence of Alexandria and the interest of scholars in the epics, Apollonius of Rhodes in the third century wrote his *Argonautica* which he cast in the epic mold, but he shows a great interest in internal qualities and analysis of feeling. Virgil tried to imitate Homer, but was unable to refrain from subjectivity, and, lastly, Dante, Milton, and Goethe, considered among the great epic poets, selected the epic mold as a worthy vessel to contain very profound philosophical reflections.

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[9] F. H. Stoddard, *Evolution of the English Novel* (New York: The Macmillan Co., 1902), pp. 11 ff.

In a time when there were neither newspapers or radios, but when citizens had a large voice in government, rhetoric had a great and lasting popularity and occupied the place of greatest importance in the educational curriculum as it was necessary for every man of consequence to be able to speak effectively. The Greeks not only developed and named this branch of learning (rhetoric), but they invented the terminology of grammar, the various tropes which give variety and vigor to speech, and the various types of sentence structure which have remained models of style for centuries.

The highest degree of literary perfection was reached by the ancients in drama. Dramatists borrowed whatever met their needs—various verse rhythms from other fields of poetry, and subject matter from religion, philosophy, legends, and close observation of human nature. Drama started from the acted presentation of the experiences of the associates of Dionysus (god of wine and nature), combined with a choral performance rendered by a chorus, which sang to musical accompaniment, and interpreted their lines by gesture and dancing. In its beginning, it was a curious combination of what we call today drama, opera, and ballet. In the course of time, the dramatic element overshadowed, but never completely crowded out the choral element. Drama, the offspring of a pagan religion, degenerated, and finally was banned by the authorities of a new religion (Christianity). After the Renaissance, the reacquaintance with classical dramas stimulated a revival of interest in, and production of, dramas. In this Elizabethan period the writers were widely acquainted with classical dramas and adopted classical structure and form as the starting point in their efforts.

The Greeks slowly developed history from the chronicles through the stage where the history of Herodotus combined geography, ethnology, anecdotes, and what we consider history, to the great work of Thucydides who set up for himself those canons of writing history which are adhered to today.

The incentive to gather all the available evidence, to study it carefully and impartially, and then to write a faithful and true account came from those early Greeks who gave themselves over to scientific speculation, and were rapidly approaching the scientific method. History, however, did not remain upon so lofty a plane. Later Greek writers wrote to please kinglets who fell heir to portions of Alexander's empire, and Roman historians felt that the inculcation of patriotism was their first duty. Greek and Roman histories contain many speeches. This was due to that love of oratory so prevalent in that age. It served several other purposes—namely, to make the work interesting to the reader through variety and dramatic power, and to exhibit the motives which lay behind the actions of the leaders. The Greeks considered history as a species of literature. Herodotus, the father of history, occupied high rank as a classic writer.

The first pastoral poets (about 275 B.C.) knew the life of shepherds, their simple ways and tastes. Their works were popularized by the Ptolemies of Egypt who sought respite in the island of Cos from the heat and turmoil of Alexandria, and who toyed with the idea of the simple life. It was a situation duplicated in France under Louis XIV and his successors. Virgil added the allegorical element to pastoral poetry. Longus (about 200 B.C.) wrote a novel which had a strong pastoral flavor, and thus set the example for the use of prose in pastoral writing. Boccaccio and others down to Philip Sidney wrote in a combination of verse and prose, and Tasso added the dramatic element. His great work (the *Aminta*) was produced by a troupe of actors and singers to musical accompaniment, and thus became an important predecessor of grand opera. Sir Philip Sidney's *Arcadia*, a pastoral novel in both prose and verse and the heir of the ancient and renaissant pastoral and of the ancient novel, had a host of admirers until Elizabethan drama replaced it in popularity. The dramatists, however, were greatly indebted to the *Arcadia* for plots and characters. The pastoral note is struck in Shakespeare's *As You Like It, Midsummer Night's Dream, The Tempest,* and *The Winter's Tale. As You Like It* shows an indebtedness in portions of plot and characters to Lodge's *Rosalynde,* a pastoral romance of the type of the *Arcadia.* The *Pericles, Prince of Tyre,* ascribed to Shakespeare, exhibits a plot which first appears in *Apollonius of Tyre,* a Greek novel of the second century A.D.

The Romans borrowed the alphabet from Greek colonists who had settled in Italy. Aside from some kind of script and stenographic characters about which next to nothing is known, the Romans used capitals only. In this they were so proficient that draftsmen still look to the triumphal Arch of Titus in Rome (erected shortly after 80 A.D.) for their models of block capital letters. Extant manuscripts of about 400 B.C. show capitals exclusively. Small letters gradually made their appearance, the first ones being o, s, u, v, and the like, which were merely capitals written small. These capitals, except in Greece and the lands of the orthodox Slavs, were generally adopted throughout Europe, and in the course of time have given rise to the two principal forms of type used in modern printing: the round, or Roman, like the type used in this book, and the pointed, or so-called Gothic, which is generally called black-letter type. The latter is still used to some extent in Germany, and the former is the normal one elsewhere in Europe. The Germans, in retaining Gothic type, are preserving a tradition that had lasted over eight centuries. The Italian humanists of the fifteenth century first broke away from the use of the Gothic type which all Europe had employed since the thirteenth century. This departure was followed by France, Holland, and then by England, all within a hundred years. The newly adopted Roman type was not a new creation but a revival due to the newly acquired passion for the classics. A variety of Gothic type has survived among English speaking peoples as an ornamental script, used in church windows, wood-carving, calling cards, and in the word **Whereas** in legal documents.[10]

Latin served the purposes of the medievalists. Some writters, like Erasmus, took Cicero and other classical writers for their models. This attempt tended to check the natural development of Latin to meet the needs of the times. Any language which is alive is constantly growing and changing, and Latin was changing meanings of old words, coining new words, and borrowing from various sources. It was simplifying inflections, and substituting the accusative for other cases and the masculine for the neuter. Jordanes, a Goth, in the sixth century set himself to write a history in Latin. He says, "*scito me maiorum secutum scriptis ex eorum latissima prata paucos flores legisse.*" (Know that I, following the writings of my predecessors, have plucked a few blossoms from widely extended meadows.) Horrifying Latin! About 1100, Roland in the *Chansons de Geste* enumerates the duties which a vassal owes his lord:

> Por son signor deit hom sofrir granz mals
> E endurer e forz freiz e granz calz
> Si'n deit hom perdre del sanc e de la carn.

The Latin representing the above has been written out by a French critic:

> Pro suum seniorem debet homo sufferire grandes malos
> Et indurare et fortes frigidos et grandes calidos.
> Sic inde debet homo perdere de illum sanguinem et de
> illam carnem.[11]

The foregoing shows how Latin gradually changed into French, for the inhabitants of France did not speak classical Latin until midnight of December thirty-first of a certain year, and then begin next morning to speak twentieth-century French.

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[10] G. C. Crump and E. F. Jacob, *The Legacy of the Middle Ages* (Oxford: The Clarendon Press, 1927), p. 225 *et passim.*

[11] Ferdinand Brunot, *Histoire de la Langue et la Litterature française,* ii, p. 471, quoted in Crump and Jacob, p. 152.

Certain works in Latin—the poems of Hrosvitha, the writings of Erasmus, Petrarch, Abelard, some hymns and prayers would be good Latin in any age. The medieval student enjoyed a treasury of Latin songs, solemn, jesting, grave, and frivolous, far larger than that available to modern students.

The celebrated *Gesta Romanorum* (late thirteenth century) was a famous collection of stories which are still entertaining. As likely as not Julius Caesar may be represented as conversing with a person who had been dead several centuries but this book "either directly or indirectly furnished to Boccaccio the groundwork of the *Two Friends;* to Lydgate, his *Tale of Two Merchants;* to Gower and Chaucer, their *History of Constance;* to Shakespeare, in part, his *Merchant of Venice, Lear,* and *Pericles;* to Parnell, his *Hermit;* to Walpole, his *Mysterious Mother;* and to Schiller, his *Fridolni.*"[12]

In addition to those works already mentioned, Augustine's *Confessions* and *De Civitate Dei,* Thomas A. Kempis' *Imitatio Christi,* and Aquinas' *Summa contra Gentiles* are unquestionably undying classics.

The fact that Europe was filled with many vernacular languages and dialects perpetuated Latin for centuries as a *lingua franca,* just as in modern times scientists employ a terminology based upon Greek and Latin so as to make themselves universally understood. These dialects became engaged in a struggle for pre-eminence, and ultimate victory depended upon cultural and political considerations. Generally speaking, the Teutonic vernaculars reached literary rank earlier than the Romance vernaculars which had to overcome the competition of Latin in the territory of the old Roman Empire, and French in turn attained the rank of literature before Spanish and Italian. The Bible was translated for the Goths into their vernacular as early as the fourth century. Northern myths, mainly epic, such as *Beowulf,* the *Edda,* and the *Niebelungenlied,* penetrated into European literature. From the tenth to the thirteenth centuries and under the impetus of chivalry the lyrics of Provence and the passionate romances of Britain made their appearance, and the names of Tristan and Yseult and Launcelot became forever fixed in the tablets of memory. Here also belongs that sparkling little jewel *Aucassin et Nicolette.* The days of knighthood are long gone, but its influence is still with us. Euripides could raise the question (in his *Alcestis*) whether the less valuable life should sacrifice itself voluntarily that the more valuable one might be spared, and the Greek audience readily agreed that Alcestis should die instead of her husband. A modern audience is prone to criticize her husband for accepting such a sacrifice. Here is seen a sample of the influence of Christianity and of chivalry which exalted and glorified woman. ''Women and children first'' is a rule rigidly adhered to when life boats are manned in time of disaster at sea—a rule which derives from chivalry.

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[12] S. J. Herrtage, *The Early English Versions of the Gesta Romanorum* (Oxford: The Clarendon Press), quoted by Crump and Jacob, *op. cit.,* p. 159.

The drama of the medieval period was fostered by the Church, and drama owed little or nothing to the classics until the Italian Renaissance. Religious drama appealed to the masses, and was intended to instruct by visual and oral methods those who could not read. The royal courts found entertainment in epics, lyrics, and stories. About the twelfth century, lyric poetry acquired such a vogue as is comparable to modern dance music or radio programs. The output of transcendental visions influenced the *Divine Comedy* and much later, *Paradise Lost.* Dante employed allegory, a favorite device of the Middle Ages. Boccaccio, Chaucer, Spenser, and Rabelais were steeped in medievalism. These, together with Dante, Ariosto, Petrarch, and others, were also ushering in a new literary era.

The Middle Ages attempted to destroy the classical heritage, and to a large degree succeeded. The Renaissance ushered in an era where all local and vernacular literature was disparaged. Its scholars held up the classics as alone being worthy of admiration, but only succeeded in stunting for a time the normal process of literary creation in the vernaculars. Modern literature is the joint heir of the classical and medieval periods.

SOME PHASES OF ECONOMIC PRACTICES [13]

It is widely believed that in the pastoral age herds were the common property of the group or tribe, but when the human race learned to practice agriculture, private ownership became a prominent feature of economy, first of land, then of houses, and other forms of wealth. Some of the more skilled made pottery and other commodities and bartered them for other goods, and, later, sold them for money. In the ancient world, some men made their living in the realm of transportation by land and sea, and some engaged in rudimentary banking. The modern world, however, owes more in economic activity to medieval than to ancient Europe. Goods were not only made to fill orders, but also for chance sale. By the fourteenth century wholesale manufacturing went far beyond the point reached by the Romans, and now appeared the middleman. Workers began to be exploited, and revolts and civic turmoil followed. At the same time were developed commercial habits, ideals, and laws which were to prove significant for later times.

As early as the thirteenth century, paper money was used as the equivalent of metal coins, and was accepted, at least in certain Italian cities, in payment of debts to the state. At about the same time, certificates of indebtedness, issued by political units, attained the status of currency. Public banks, few in number, made their appearance in Italy and Spain, but private banks were numerous. These banks changed money, received deposits, made loans to customers, cashed checks, and transferred credits. Banking and merchandizing require bookkeeping. The first treatise on double-entry was printed in Venice in 1494, and the art spread over most of Europe in the following one and one-half centuries. The fundamentals of modern systems and practices in accounting unquestionably had their beginning in Italy in the fourteenth and fifteenth centuries.

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[13] The author is here indebted especially to N. S. B. Gras, *The Economic Activity of Towns,* in Crump and Jacob, *op. cit.,* pp. 435-464.

The word ''company'' comes from *companes*—business partners who ate bread together. The next step in business association was taken when an inactive capitalist (*commendator,* one who entrusts) contracted with an active partner to receive a share of the profits of the enterprise, or he would lend money on a contract to receive a certain rate of interest. Here we see the embryonic stockholder and bondholder, respectively. The principle of joint stock holding was made use of as early as 1415 in the iron industry of Leoben.

Craft guilds whose members were apprentices, journeymen, and masters inculcated high ideals of manufacture, commerce, and labor. The apprentice system is still used with satisfactory results, and is often imposed upon industry by labor unions. This system was the inspiration of a new movement in England (about the time of World War I), known as guild socialism which is claimed to be the golden mean between syndicalism and state socialism.

The cartel is frequently encountered in Europe, and in America, as well, although in this country the association exists while its name is rarely seen. It is an association of manufacturers or merchants who have agreed to maintain or raise prices, either directly or through restricting production. There are isolated instances of such agreements from the fifteenth century to the present time.

Another business practice which has important results for modern times was the regulated trading company. Merchants who engaged in one kind of trade or who were engaged in trade in the district, found it advantageous to send their combined ships in fleets for mutual protection against pirates. They soon discovered that such large fleets could overawe foreign cities and even nations, wrest for their owners distinct privileges, and subsequently maintain them. By means of such trading companies, England won markets, established colonies, acquired commercial hegemony, and built up her empire.

Capital was accumulated as towns flourished. In some, like Venice, guilds of rich business men became a ruling oligarchy. In others, single families or individuals were pre-eminently in control by virtue of the power of wealth. The large accumulations of capital brought in their train a mixture of blessings and evils. Trade routes were opened up, backward countries were given the blessings of civilization, culture was diffused, hospitals founded, education was extended, civilization tended towards homogeneity, more leisure was enjoyed, the laborer demanded higher wages and a shorter working week, and obtained them. On the other hand, popes and kings could carry on wars, greedy ambitions were fostered, subject races were exploited, individualism, materialism, and worldliness seared their ugly brands upon men's souls.

SOME IMPORTANT ECONOMIC DOCTRINES

A medieval craft guild was an organization of workers engaged in some craft, formed for social and religious objectives and for the economic purposes of internal regulation of work and monopolization against non-members. It aimed at attaining a traditional standard of life and security for its members. It formulated codes of ethical practices. Guilds largely dominated manufacturing until the development of factories.

By the fifteenth century there had appeared a complete economic doctrine, known as the canonist, based on ethical principles sanctioned by the Church, but maintained by jurists as well as by theologians. Medieval writers condemned the pursuit of wealth as an end in itself, and avarice, which may be defined as the eagerness for gain from the mere desire of piling up wealth, was one of the deadly sins which, according to Dante and others, could not be expiated in Purgatory. However, men had been placed by God in ranks and orders, and gain was therefore justified insofar as it was sought to enable a man to sustain himself as befitted his rank and status, to relieve the poor, and to promote the public good. Canonist, or scholastic, doctrine[14] was concerned chiefly with a ''fair or reasonable price,'' that goods should be of standard quality, that debts should be paid when due, and in the prohibition of usury. This ''fair'' price was to be based upon the cost of materials and of labor (invested capital was negligible) and upon the cost of transportation. Every commodity has some absolute value, and to sell a thing for ''more than it is worth'' was regarded as immoral. All labor, however, was not equal, for the laborer's wage depended upon his social status.

Canonist doctrine prohibited usury, and the Church vigorously waged war on interest to the point of forcing many a man to make restitution even on his death bed. But the more money economy developed, the more frequently was the prohibition evaded and the Church had to meet the situation by general indulgences.[15] The charging of interest came to be justified in two ways: (1) *damnum emergens,* a loss or injury suffered by the creditor through the default of the debtor, about the justice of which the canonists never had any doubt, and (2) the *lucrum cessans* (''certain gain lost''), the idea being that the lender should be compensated for the gain he might have made by using his own money. This compensation should be *''quod interest,''* that ''which lies between'' the principal of the ban and its probable increase if the principal were used in trade by the lender. As it was more satisfactory to both parties to agree on the *quod interest* in advance than to wrangle over it at maturity of the loan, so a common business practice became established, and the word ''interest'' acquired its present meaning.

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[14] Formulated particularly by Thomas Aquinas (died 1274) and Albertus Magnus (died 1280).

[15] Max Weber, *General Economic History,* trans. by Frank H. Knight (New York: Greenburg, 1927).

The canonist period, roughly speaking, was succeeded by the mercantilist period, brought about by several factors, among which may be mentioned the decline of the influence of the Church, the increasing wealth of the world and the increase in money made possible in large part by mines in America, extensive exchange, growing foreign commerce, larger standing armies, rising prices, and the increased wants of growing states.

Mercantilism, briefly stated, was a policy developed by European cities, and later by states, aimed at making the nation economically strong by guiding and restricting men through prohibition against certain imports, by bounties on certain exports, and protective tariffs. It was hoped that the state could endure through abundance of food produced, so far as possible, at home, with plenty of raw materials carried in its own merchant fleets, subsidized if necessary, and defended by its own navy, and with favorable trade balance.[16] The state was operated as if by and for capitalistic entrepreneurs.

The rise of merchant princes and the appearance of ''big business'' gave the merchant a voice in public affairs, and mercantilism, although opposed by the laborer who wanted higher wages, and by free trade with its lower prices, became the more or less dominant economic system especially in England, France, Holland, and Germany (where it is known as Kameralism) during the sixteenth to nineteenth centuries. Some of its features are discernible in recent times, namely, the emphasis on gold hoards, related policies in tariffs, import quotas, bounties, exchange restrictions, price fixing, a naive resort to legislative expedients, a social planning of economic life under dictatorships or democratic regimentation, an effort to attain a fully developed nationalism.[17] This reversion to mercantilistic policies has not been so pronounced in the United States due to wide sectional differences in interests, to a lack of economic unity, and to a humanitarianism which was taking the ''forgotten man'' into consideration.

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[16] N. S. B. Gras, *An Introduction to Economic History* (New York and London: Harper and Brothers, 1922), pp. 200-201.

[17] Lewis H. Haney, *History of Economic Thought* (3rd ed.; New York: The Macmillan Co., 1936), pp. 144-145.

Mercantilism aimed at building a strong state in which entrepreneurs were restricted and, generally speaking, laborers were disregarded. Meanwhile, in France the stage was being set for the Revolution, but before that catastrophe occurred, certain economists, known as physiocrats, the leader of whom was Quesnay, influenced by the philosophers Locke and Descartes, attempted to amend the evils of the time through a new economic doctrine which they hoped would bring a measure of equality to the poor, tax-ridden peasant[18] and considerable freedom of action to all persons. They maintained: (1) that nature conferred upon the individual the right to pursue his own personal interests, to acquire, use, and dispose property without governmental restrictions, and (2) that the only function of government is to protect life, liberty, and property. The doctrines of these physiocrats are clearly shown by their two famous maxims *laissez faire* and *laissez passer,* that is, let things alone, let them take their own course. The first maxim, of course, means chiefly hands off business and personal interests, while the second one means that goods should be allowed to pass without hindrance to their natural markets, inside a country or beyond its borders, and, carried to its logical conclusion means ''free trade'' as opposed to ''protectionism.''

Certain economists, especially British, call Adam Smith, author of the *Wealth of Nations* (published 1776), the father of economics. Smith believed that economic institutions spontaneously appeared, due to the operation of natural instincts, and that these institutions must therefore be good. Governments, always prone to extravagant spending, should permit the principle of *laissez faire* to run its own course and should not intervene except in a few matters, such as postal service, compulsory education, and banking. Smith was a free trader, and thought that no country should manufacture a commodity which another country could produce at less cost. Men do not engage in business for the public good, but out of self-interest, and this situation is commendable for acts beneficial to the individual promote the national welfare. Smith was sympathetic with labor for the laborers constitute the great majority of the population, so that the welfare of the nation depends upon the well-being of the workers. Competition is useful to society. The mutual good will of the workers, of the consumer, in fact, of all concerned leads to success in business, and that good will is attained by acting justly.

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[18] One of their celebrated maxims was "poor peasants, poor kingdom; poor kingdom, poor king."

The dominant schools of economists in England, France, and Germany followed the lead of, or were influenced by Adam Smith, and from Smithianism grew the English classical economics which exhibited materialistic and pessimistic characteristics. Important pillars of classicism were Bentham, Malthus, Ricardo, and Mill.

Adam Smith and others have been spoken of as optimists and naturalists, because they believed in ''natural'' or ''providential'' laws which, when obeyed, would effect good results. They were followed by the pessimists whose best representatives are Robert Thomas Malthus (1766-1834) and David Ricardo (1772-1823) who enunciated new doctrines which led Carlyle to call economics ''the dismal science.'' In the face of the prevalent opinion that an increasing population was advantageous, Malthus' famous essay on population (which ran to six editions) exploded a bomb shell. He thought that population tends to increase in a geometrical ratio and subsistence in an arithmetical ratio. Therefore, the increase in population must be checked. In view of the fact that the population and wealth of England have at least quadrupled since 1850 and despite increased food production and greater national wealth the birth rate has greatly declined in several countries, it is pretty well agreed now that the causes of this decrease are more social than economic. Malthus thought that the poor were the authors of their own wretchedness, due to early marriages, large families, and their own improvidence, and that no law, no private or public charity, no privately or publicly provided charitable work could help the poor, but would only increase their number. Malthus' doctrines, no doubt, played a considerable part in preventing socialistic or communistic ideologies from making headway for several generations and stimulated the interest of Darwin in the biological doctrine of "the survival of the fittest."

Ricardo, a wealthy broker, is one of the greatest names in economics. "Rent is a creation of value, not of wealth," he says, due to the fact that increase in population calls inferior land into cultivation. The measure of rent is determined by the cost of production on the less favorable land. Rent permits landlords to live at ease without laboring, so the Ricardian theory of rent afforded every Marxian a point of attack upon private property, and has stirred up in various quarters violent and heated criticism. As less and less favorable land is brought into cultivation, the point is reached where the farmer quits because the yield is too small in proportion to the cost. From this reflection Ricardo formulated the law of diminishing returns, which, of course, is applicable to other phases of production besides agriculture.[19] His theory of value is the starting point of modern socialism. Adam Smith regarded value as being determined by three factors: labor, land, and capital. Ricardo simplified matters by accepting labor as the only factor in determining value, although in another place he says value depends upon the cost of production. He, like Marx, wrote obscurely, and his readers are puzzled at times to know what he meant.

Ricardo also discussed wages, profits, money, and free trade, and here, as elsewhere, he was fated to challenge thought and to arouse storms of praise and condemnation. He was a pessimist but was reconciled to the situation because he apparently thought that human laws can not cause economic laws to deviate from their course.

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[19] This is not to state that Ricardo first observed this phenomenon. Xenophon (*circa* 400 B.C.) shows an inkling of it in his *Oeconomicus*.

John Stuart Mill (1806-73), intellectual giant, profound scholar, talented writer, is not so famous for propounding new doctrines, as for the brilliant definitions, concise formulas, and logical development of arguments which embellish his writings and have given such prestige to his *Principles* that this book has long been used as a text in many universities of English-speaking peoples. There are two periods of his life divided about equally between individualism tinctured with Benthamism and an inclination towards socialism influenced by Saint Simon and Comte. Mill opened the door to legislative reforms when he argued that wages, profits, and rent are not determined by unalterable laws; the laws of production are fixed, but the legislator can regulate the situation by controlling distribution. Mill aimed at retaining the maximum of personal liberty under a partially socialistic state by the abolition of the wage system and the substitution therefor of co-operative production; an equitable tax on land; and restrictions on the rights of inheriting wealth which the heirs had not helped to create.

Socialism and communism are attempts to place those at a disadvantage on the same level with those who have enjoyed advantages, or to place all survivors on the same level after exterminating those who have enjoyed greater advantages. Early utopists and socialists hoped that existing distinction in class and wealth could be abolished and a desirable degree of equality attained through peaceful evolution without resorting to a violent revolution. Others have advocated the use of violence and a complete wiping-out of the existing order. Equality was to be imposed by a strong government, but a strong government means a strong official caste, and immediately people are not all standing upon the same level, with the result that the attainment of equality is thwarted. Again, for example, all workers are to have equal wages; then some must be assigned to the meanest tasks, and men are thus deprived of the freedom of following their own inclinations in choosing their occupations. The idea of equal wages was given up, as being unworkable, at the very start of the Russian communistic regime. From the foregoing, it is seen that as complete equality is approached, liberty to a corresponding degree, is lost, and it follows as a corollary that, as complete liberty is approached, equality is proportionally lost.

Americans have long emphasized liberty, and for a long period of their history have been opposed to restrictions imposed by government. In the era of liberty (*laissez faire*) certain abuses appeared, such as monopolies, excessive profits, low real incomes for labor, and the like, until the majority of the people came to demand that government intervene and impose restrictions upon freedom of action, and again we hear of such things as ''fair and just price,'' and a ''living wage for labor.'' One of the advantages of the democratic form of government, whose primary precepts are a ''government of the people, by the people, for the people,'' and that ''government exists for the people, not the people for the government,'' is that when the people become aware that too much liberty is being surrendered for equality, or too much equality is being surrendered for liberty, they can demand a halt and start a swing in the other direction. The opposing forces of those pulling in the direction of equality and those pulling in the direction of liberty have a good chance of attaining the Aristotelian golden mean between these two extremes—a mean which can not remain stationary, for, at any one time, more liberty or more equality will appear to be desirable.

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VI. SOME FAMOUS IDEALS OF EDUCATION

THE deep-seated problems of education today are as old as the effort of man to govern himself and to improve his social conditions. In every age certain questions must be solved: Who is to be taught? What type of instructor is best? What subjects are to be included in a course of study? What methods of instruction and learning are most suitable? For what purpose or end is an education desirable? These questions are all basic, but this is especially true of the last one, for a clear idea of the purpose and value of an education will determine much about the proper method, the subject matter, the ideal teacher, and even the type of individual who is deserving of an education.

In this chapter we shall present a few answers to the foregoing questions, answers which have been given by several of the great European thinkers. These thinkers are men who represent important periods in the growth of European culture and thought. They are also men who have viewed the problems of education in the light of larger social and philosophical studies, and who are therefore capable of giving a more penetrating perspective to these problems.

A further matter must be clearly borne in mind. We are here studying ideals, not real practices. These ideal systems, contained first only in the minds of their sponsors, have often had profound influence upon the subsequent practices of later generations as well as upon the ideas of later writers. Also, ideals often begin as criticisms of existing orders, but in their course, they grow into positive reconstructions.

We shall begin with the most important thinkers of the ancient world: Plato and Aristotle. Although the concern of the present volume is American education, with its background and its potentialities, we cannot neglect the ancients. The setting of the stage is of great importance to any drama, and it is not unfair to say that the philosophical and scientific thinkers of antiquity have set the stage of modern life in many essential respects. The relatively permanent ideals of mankind are only seen when we delve into the remote past, nor can the new in human affairs be known except by contrast with the old.

PLATO

The Socratic method of teaching is Plato's method of writing. The supreme emphasis in this method is upon the eliciting and developing of the hearer's or reader's own thought, and not upon the transference of information from one mind to another. Without this cultivation of the mind neither Socrates nor Plato believed that there could be real education.

Plato wrote two idealized schemes for human society: the *Republic* and the *Laws.* The former is, if anything, more idealistic than the latter. But in both, the ideals of education are treated in similar manner, so that we shall present here a composite. Plato's primary social concern is for an ideal political order. However, it is obvious to him that the kind of education which is given to the citizens of a state—especially to the potential rulers—will determine very greatly the possibilities of social improvement. Hence, the problems of education must be extensively considered in the light of the ideal citizen and the ideal ruler.

For Plato, the supreme qualification for a good ruler is *wisdom.* This is not a wisdom which comes from a clever wit or from extensive recollection of detail. Rather it means the ability to discriminate intellectually, to distinguish the genuine from the fake, to see through to the roots of things and apprehend the larger structures and patterns of the world. To accomplish this sort of wisdom, a most intensive sort of training is necessary.

Beginning with the proper care of the infant, even in the pre-natal stage, Plato carefully outlines the whole course of development. Apparently he feels that a large part of character formation takes place in earliest infancy.[1] The child's environment must be one of harmony and concord, else he cannot learn to be well behaved. However, there can be no laxity of discipline, for the state will stand or fall according to the sanctity with which the laws are regarded by the citizens, and this regard for law is based in the earliest training. Rhythmic and choric exercises, Plato believes, will aid in controlling the normal exuberance of infancy.[2]

From the ages of three to six, children of both sexes should attend a sort of nursery school. That is, they should play together daily under the strict supervision of nurses and matrons. Here again, discipline is important lest the children become too self-willed. However, care must be taken that punishment should not give rise to feelings of disgrace or outrage. At the age of six, boys and girls are to be separated, and the boys especially taught horsemanship and the use of arms.

The education, which will lead to wisdom, commences more seriously after the age of ten. The new curriculum will center around ''music,'' literally any art presided over by the Muses, and referring especially to poetry sung or recited to an accompaniment (i.e., ''lyric''). Under the heading of music one would learn reading and writing, singing and playing, and the art of accompanied recitation of poetry. The

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[1] See *Laws*, 642. "The most important part of education is right training in the nursery." Jowett translation, 3rd ed. (London: Oxford University Press, H. Milford, 1924.) By permission of the Clarendon Press, Oxford.

[2] See *Laws*, 653-654. (This and subsequent passages are summarized from Benjamin Jowett's translation.)

Greeks were fond of any such recitation, and were not always careful about the sentiments expressed by the poems. Plato insists that these poems be very carefully selected, not only to eschew examples of the base and stupid, but to offer children examples of the good and noble. Indeed, Plato condemns poetry in general for its imitative character and its tendency to lull the mind rather than to arouse thoughts. It will be noticed throughout that the development of taste, good behavior, and a balanced personality is more important for Plato than the acquisition of a fund of information.

While cultural training is emphasized for this period of life, the body must not be neglected. Plato follows the general Greek belief in the association of a sane mind with a sound body. Gymnastic exercises continue or recur in the Platonic scheme of education alongside the musical. Here again, however, a careful selection of exercises is necessary lest trickery in boxing and wrestling should develop deceit in the individual. Those sports are best which are limited to free, rhythmical movements, developing health, poise, and a feeling of harmonious balance.

Arithmetic, geometry, astronomy, and harmony will compose the higher education for those capable, though all are to be introduced to these subjects in the regular secondary education.[3] Pure arithmetic and geometry were extremely intriguing to the Greek mind, and harmony and astronomy were closely correlated with mathematics. Plato himself was particularly ratio-minded, analyzing everything possible in terms of proportions and analogies. Even his famous myths are parables or ratios of a type. Of astronomy and harmony, Plato says:

> God invented and gave us sight to the end that we might behold the courses of intelligence in the heaven, and apply them to the courses of our own intelligence which are akin to them, the unperturbed to the perturbed; and that we, learning them and partaking of the natural truth of reason, might

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[3] *Laws,* 818, 967, and *Republic,* 537.

imitate the absolutely unerring courses of God and regulate our own vagaries.[4]

This is a noble expression of Plato's supreme faith that regularity in nature is God-given and understandable by the human intellect. Dialectic, originally a reasoned argument or discourse, came to include the traditional subject matters of rational discourses, that is, philosophy. After a period devoted to geometry, arithmetic, harmony, and astronomy, those few who were supremely capable should be allowed to continue into the study of dialectic or philosophy, including the highest sciences. Those men who constituted the ruling class of the *Republic* would have finished their education at thirty-five and be ready for public life. At fifty, however, they were to leave active life and return to their philosophical pursuits.

So it was that Plato started his education with the need for inculcating a feeling of virtue and harmony, and ended it with the study of philosophy which is the particular study of universal harmonies. From contemplation of the supreme regularities of earth and heaven comes knowledge of the wise soul and of the good state, in brief, comes the kind of wisdom which Plato idealized.

For the citizens of the state, education must be compulsory. The compulsion is placed on the parent rather than on the child; for, indeed, Plato hoped that from the point of view of the student education would always be appealing. For the younger children, it could even be made a sort of game.[5] Furthermore, Plato considered it the responsibility of the state to provide school buildings and teachers, and great care must be exercised in the selection of the latter.

In general, the ideal purpose of education for Plato has been profusely indicated. Education must inculcate a sense of disciplined harmony, self-control, and "virtue," which will lead to a perfect justice in the state; yet there must be enough freedom to maintain independent thought and a continuous search for truth. Education must bring wisdom and understanding, for these are of all things the greatest good.

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[4] *Timaeus,* 47. (Jowett translation.)

[5] See *Laws,* 643, 804, and *Republic,* 435, 536-7.

ARISTOTLE

Aristotle's own method of teaching is the best indication of his ideal. For many years he met his pupils at a gymnasium known as the "Lyceum." This was a small park near Athens, similar to the Academy of Plato, with a building devoted originally to athletic exercise. It was a social gathering place, however, as well as a gymnasium in our narrower sense of the word. To this place the students came twice daily to walk along the shady paths with their teacher, and to discuss the problems presented. It was for this reason that the school was called "peripatetic" which means simply "walking around." The late William Romaine Newbold has given us an intimate picture of this method of conducting school:

> The "morning walk" was reserved for advanced students and was devoted to the exposition of Aristotle's technical philosophy, but to the "evening walk" beginners were admitted and the themes were handled in a lighter, more popular style. During the morning walk Aristotle usually read one of his more formal treatises, adding such oral exposition as he thought necessary, but sometimes he talked from brief notes. One set of such lecture notes still exists, incorporated into the twelfth book of the Metaphysics. During the evening walk he probably read one of the more popular works, such as the dialogues or works on history. Possibly it was during the evening walks that he held his seminar, as we would call it today, of which the bulky book of Problems constitutes such an interesting memorial. Diogenes says that he made rules for the conduct of the discussions and every ten days appointed a "President." The "President" was, no doubt, one of the more advanced students and it has been supposed that he maintained on certain occasions a given thesis against the attacks of his fellow-students. But the evidence of the book of Problems goes rather to show that the duty of the

President was to propose problems in any branch of science and to criticize the solutions offered by the others.[6]

This method of conducting classes certainly presents an appealing picture. It would depend upon the climate and other facilities, of course; and, too, we must realize that this plan is intended only for what we call ''higher education,'' and higher education for a select group. What is more important, we must note that Aristotle's method of teaching is, like Plato's, a method of discussion; though in his more serious writings he abandoned the dialogue style for simple, dogmatic exposition.

Aristotle's proposed scheme of education, developed in the *Politics,* is in many respects similar to Plato's. With Plato, he believed in the ideal of a eugenic society, though he was less willing than Plato to abandon the family as a valuable social institution. The measures which Aristotle advocated for insuring a hardy and eugenic race are: careful control of marriage, adherence to the Greek practices of exposing weak and malformed children, and adopting such customs from non-Greek peoples as dipping children just after birth into cold rivers to inure them against hardships.

Children, up to the age of five, must be as active as possible, not hampered with unnecessary clothing. Their games likewise should be those of free exercise, without too much thought of learning or compulsory labors. Games may, however, imitate ''the serious occupations of life.'' In contrast to Plato's preference for unruffled calm in infants, Aristotle thought lusty crying would develop breathing and contribute to hardiness. But like Plato, Aristotle insisted that elders must carefully refrain from indecent talk around children, ''for light talk about anything disgraceful soon passes into action.''[7] Aristotle's greater faith in the family led him to consider the best place for the early training of the child to be in the home. He did not advocate a ''nursery school,'' or state-supervised training in infancy, as did Plato.

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[6] William Romaine Newbold, "The Spell of Aristotle," *University of Pennsylvania, Lectures for 1914-15* (Philadelphia: University of Pennsylvania Press, 1915), pp. 502-3.

[7] Indecent pictures, statues, and plays are likewise forbidden.

At seven, all children go to public school. The state, again, is to supply this schooling; for the state needs a consistent ideal which is taught and guarded by a controlled education. Aristotle believed that public matters should be under public, not private, control, and that a state which neglected its education was jeopardizing its constitution.

Aristotle divided the public school curriculum into (1) subjects which are useful for some further end, and (2) those which are valuable in themselves. Of the subjects commonly taught in the Greek schools, he considered reading, writing, gymnastics, and sometimes drawing, of the first sort; and music, including literature, of the second. Aristotle foresaw that some might question the need for music in view of its lack of utility in business and war. But its importance must have been recognized by those who caused it to be included in the curriculum, he argued, and this importance comes from its value in teaching a noble use for leisure time. He saw a place for both the trade school education and the liberal arts course as well. But he emphasized the importance of knowing how to use peace and leisure nobly as a knowledge even greater than the art of succeeding in war or business. The aim of war is peace; the aim of business is leisure. And we must infer from this that the liberal arts course is more significant than the trades course. That so few people, when they do get peace and leisure, know how to use it, was for Aristotle a deeply lamentable situation; for knowing principally the arts of war and business, they misuse their peace and leisure.[8]

Education ''by habit'' and training of the body should come before education ''by reason'' and training of the mind. Too much exercise, however, should be avoided; for Aristotle decried anything in excess, and a good activity when indulged to the elimination of some others may itself become a vice. The ideal is that of a well rounded, balanced personality. Commencing, then, with light exercises until puberty; following this with three years devoted to reading, writing, and music; and returning to a period of more severe bodily training, we have what Aristotle considered the preferred sequence of education. Nor should athletics be taken concurrently with the mental training; ''For it is wrong to work hard with the mind and body at the same time,'' since bodily exertion impedes the activity of the mind and *vice versa.*[9]

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[8] See *Politics,* 1333a, ff.

Aristotle dealt with music in great detail. He attacked the common opinion that it was altogether vulgar, though he admitted that music of certain types, and especially instruments like the flute, had a detrimental influence. Young children should be taught to sing and play; for this ability will not only serve to direct their natural restlessness, but it will also enable them to judge better the beautiful from the vulgar in music. Later on, boys should be exempted from participating in musical enterprises, especially competitions, for Aristotle considered it beneath the dignity of free men to be professional performers and caterers to public taste. Music is judged by the extent to which it contributes to a virtuous character, intellectual and cultural entertainment, and relaxation, if relaxation is not deemed an end in itself, but only a temporary repose. The Aristotelian doctrine of purification (katharsis), developed in connection with tragedy, is mentioned also in respect to music; for it too can purify and purge human beings emotionally.[10]

For the higher part of Aristotle's curriculum we can only guess, since the *Politics* is incomplete. He has answered for us, however, the question of the character of students, and enough of the matter of curriculum for us to discern its main outlines. The ideal of education in general is inextricably interwoven, for Aristotle, with his ethical theories of human happiness and human good. He assumes that all human beings desire happiness and naturally seek that which they believe will contribute most to it. But individual happiness is a very special and difficult matter. Considering each person with a view to his own potentialities, we see that he will have particular sources or kinds of happiness. Whereas the greatest happiness for the ideal man is found in the active use of his reasoning powers, it is true that this is well nigh impossible and even painful for many. Such persons must be content with a lesser happiness derived from other functions. The well balanced life, one in which all the noble and virtuous capacities are proportionately developed, would be a more suitable goal for the average man.

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[9] *Ibid.,* 1338b.

[10] *Ibid.,* 1341b. See also *Poetics,* Ch. VI.

Aristotle's educational ideal is caught in his ethical dilemma. The highest ideal is unattainable. The practical ideal of the well balanced life is the one more often associated with Aristotle, for it has perhaps had more influence. Applied to education, we may note the following conflicts: first, the true ideal demands that all citizens should have an equal education, but a practical consideration of human beings reminds us that some people by their nature cannot go far in intellectual pursuits, and that it would be better for them to turn their efforts elsewhere; and second, within the method of acquiring knowledge itself, Aristotle would like to give as much credit as he can to pure reason, but at the same time his practical insight tells him that the world is not entirely rational, that perhaps a securer knowledge is gained from experience and observation. May we suggest that this dilemma is not just Aristotle's, but is profoundly that of all human ages.

In general, Plato and Aristotle agreed that the greatest good for man, the greatest agency for the realization of the *human* possibilities of man, is wisdom. This is wisdom which is not a trivial array of scattered parcels of information, but an understanding of the ennobling, redeeming factors in human nature. Man, the man of reason and wisdom, is the one for whose sake everything is done. Education is only a means to the future development of our divinely innate intellectual ability, whether in this world or another, and curriculum and method are alike designed for this end. Both Aristotle and Plato were intellectualistic humanists to this extent: they saw in the human mind and in that for which it stands the beginning and end of all that is worthwhile.

THE MIDDLE AGES

In turning from Greece in the fourth century B.C. to twelfth century France we may seem to be omitting a period in which the educational ideals of Western Europe were being formed. In reality, the transition is not so great. Plato and Aristotle had set the style for many centuries. The thought of Rome and of the Middle Ages looked back to Greece for inspiration. And indeed it was not until the twelfth and thirteenth centuries A.D. that the thoughts of men in Europe were able to know the Greek masters sufficiently well to begin a modification or improvement of them.

One supreme fact had intervened, however, to change man's outlook on life and on the world. This was the fact of Christianity. The Greek preoccupation with the human mind and its reasoning processes had given way to the Christian preoccupation with man's soul and its divine longings. Reason was allowed to explain the world only when it did not endanger the truths revealed by Scripture, which had been expounded by the early fathers into the dogma of Christian belief. Supreme, consuming faith in the dogma of religion was considered a prerequisite to the soul's salvation. In such an atmosphere, a learning which would involve originality of thought, anything indeed beyond mere rote of catechism, was perilous. Nevertheless, the desire for rational explanation is strong in the human mind, and with the strength of Greek tradition behind it, dialectic was not long in asserting its prerogatives. This gave rise to a new conflict, the conflict of faith and reason, as it is termed.

We shall limit ourselves to two great figures of the twelfth century who well illustrate this conflict, and show its effects on educational theory. These men: Saint Bernard of Clairvaux, the mystic, and Peter Abelard, the dialectician, were personal opponents primarily because of the antithesis of their faiths. Though eleven years younger than Abelard, we shall take Bernard first; for his point of view is the one which is most different from the Greek, and in a sense the most characteristic of Christianity.

BERNARD OF CLAIRVAUX

Saint Bernard was born of noble parents, near Dijon, in the year 1090. Early in life he showed the fiery zeal which marked him as the greatest preacher of his time. When only twenty-five he became the abbot of the Cistercian monastery at Clairvaux (Clara Vallis), whose name was to be spread throughout Western Christendom. In 1130, Saint Bernard's influence was sought in settling a rival claim in the papacy. Innocent II, reinstated with Bernard's aid, remained his staunch friend and ally.

Saint Bernard's sermons to his monks are extraordinary in their warmth and vigor. They show his austerity and asceticism, his fervor for the cause of Christianity, his intolerance of its enemies. The central principle of Bernard's teaching is the doctrine of love, the love of man for man, leading to the greatest of loves, the love of man for God.

Bernard emphasized the humility and love in the character of Jesus. McGiffert tells us that he was the first of the great medieval Christians to preach the imitation of Christ, an imitation of the personality of Jesus as the ideal of life on earth.[11] Previously the stress had been more on the divine Christ, the Son of God. This change of emphasis is amply illustrated in Bernard's writings.[12]

For Saint Bernard, faith is not mere acquiescence in the doctrines of Christian theology, it is a vital, personal, experienced thing. The ecstatic vision of the mystic becomes an overpowering evidence in itself for the truth of these doctrines. Neither the knowledge which we gain from external experience, nor that which comes through reasoning, is by itself enough to satisfy Bernard's mysticism. True understanding comes only from a feeling of union with the divine will. Indeed, it is not an intellectual understanding at all, but more a feeling; and for Bernard the very effort to make the sublime mysteries of Christianity intelligible through logic or ''dialectic'' is blasphemy. ''I believe though I do not comprehend,'' says Bernard, ''and I hold by faith what I cannot grasp with the mind.''[13]

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[11] Arthur Cushman McGiffert, *A History of Christian Thought* (New York: Scribners, 1932), II, p. 230.

[12] See, for example, *Sermo XV* in *Cantica.*

The purpose of education from the mystic point of view is primarily a preparation of the soul for the mystic experience. The method and studies most conducive to this end vary according to the individual, but usually a rather specific program is prescribed. For Bernard, a sense of humility is the first requisite. This leads one to a contemplation of the misery of man and the greatness of divine mercy. A reading of the Scriptures, praying, or simple meditation upon the providence of God may afford the background for this vision. Suddenly, as he expresses it, we feel our souls impregnated with God; a joy and peace and tranquility come over us, conquering the fear of the day of judgment and of the condemnation which we deserve. We feel the greatness of God's love and mercy, and the hope for salvation is renewed. But it is not in following only the contemplative path that this experience may occur. Saint Bernard himself was a man of great energy, and he believed that in actively furthering God's purposes on earth the mystic vision is carried back into the lives of men.

Bernard's temperament made him naturally antagonistic to Abelard, for it was Abelard's aim to expose logically the meaning of the religious mysteries. To Bernard, Abelard was a heretic in monk's clothing. Nor did Bernard show any scruples in persecuting him, though one might suppose that

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[13] *Sermo LXXVI: 6.* Quoted from McGiffert, *op. cit.*, II, p. 226.

Bernard's ideal of love toward fellow men would prevent this. Love, however, Bernard believed, is owing only to those who love God in the prescribed manner. Heretics and God-haters deserve the wrath of the just. And Abelard, with his bold dissection of the divine nature, was presuming more than his human nature warranted.

ABELARD

Peter Abelard (or Abailard) was more the teacher and less the preacher than Saint Bernard. Apparently he had the kind of quick wit and fluent tongue which attracted students, so that in the early part of the twelfth century his fame as a teacher had spread. That a strong confidence in his own dialectical prowess and a consequent ridicule of slow and uncritical minds led Abelard to make enemies among the influential has little to do in itself with his style of teaching or his educational ideals. Yet his life and even his philosophy are heavily colored by this trait, so largely responsible for his "calamities."

While versed in the *trivium* (grammar, rhetoric, and logic), Abelard's own education did not include much from the *quadrivium* (arithmetic, geometry, astronomy, and music). His greatest conquests were made in the field of logic or dialectic, which at this time included questions of a philosophical and theological nature. He soon realized that the eminence which he sought would come only through a further study of theology, "the Queen of the Sciences." Abelard went to study under a famous theologian, Anselm of Laon, but his intolerance and contempt for the learning of others made him obnoxious to Anselm and to the latter's faithful students. Abelard shows his contempt for Anselm in a famous statement: "When he kindled a fire, he filled his house with smoke, rather than lighted it with a blaze."[14] It was not long until

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[14] *Historia Calamitatum*, Ch. III. Translated by C. K. Scott Moncrieff, *The Letters of Abelard and Heloise* (New York: Knopf, 1933), p. 8.

Abelard was himself expounding the Scriptures to a small audience of Anselm's students, who were impressed—perhaps even appalled—by his wit and mental agility. They applauded him, lending to Abelard's conceit and Anselm's annoyance.

Much of his career was mere repetition of this incident. His first theological treatise caused him to be called before a council of ecclesiastics at Soissons in 1121. The treatise, written we are informed at the request of his students, attempted to explain the meaning of the Trinity in understandable language. This prime mystery of Christian theology could not be thus treated with impunity, and the churchmen of the day knew it well. Peremptorily, Abelard was forced to consign the book to the fire by his own hand. It was a challenge, and in the following year Abelard wrote his *Sic et Non.* This curious work presented conflicting opinions from the Scriptures and the writings of the Fathers of the Church, the "Yes and No," or "Pro and Con," as we might call it. No attempt was made to resolve the contradictions; they were simply left for all to behold. Abelard professed that this treatise was intended as a book of problems for his students, who were thus given the task of settling the controversies. It thus throws an interesting light on Abelard's ideas of pedagogical procedure. The goal is consistency and truth through logic. Contradictory statements, especially those in authoritative Church documents, must be carefully examined for accuracy of transcription and possibilities of ambiguous meaning. Rules for the study of opposing texts are given in his preface to the *Sic et Non,* where he says for example:

> When we object to certain things from the writings of the Saints, as though they were opposed or foreign to the truth, the matter should be diligently attended to, lest we err because of a false inscription of title or because of the corruption of the text itself.[15]

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[15] *Sic et Non,* Prolog., coll. 1340-1. Quoted from J. G. Sikes, *Peter Abailard* (London: Cambridge University Press, 1932), p. 79n. Translation mine.

Some of the early Church Fathers published corrections of their works, called "retractations," and Abelard goes on to insist that these last opinions should be the only ones accepted from a given author's works as authoritative. Furthermore, Abelard was himself a student of semantics, so that he is keenly aware of the possibility of misinterpreting meanings. The student, he cautions, must take care to find that meaning which the writer intended. If all efforts of interpretation fail to reconcile opposing views, the opinion of the greater authority must be accepted over that of the lesser. A vast field of study was opened up by Abelard in what we should call "textual criticism."

We see how much Abelard's ideal is that of the logician. He seeks understanding through the processes of reasoning and interpretation. He insists upon consistency and careful differentiation of meaning as the basis for clarity of thought and discovery of truth.

> What, indeed, could be more ridiculous than that a man who wishes to teach others, should allow that he neither understands the matters of which he is speaking, nor knows what they are about, when someone asks if he does understand what he is saying.[16]

Against other logicians and theologians of the time, with their frequent hairsplittings, their mere verbiage, or their verbatim repetitions of confused sayings, Abelard proposed a logic which would be a genuine tool for understanding. Against those, who, like Bernard, found it better to believe, whether they understood or not, Abelard replied: "Faith is not believed in because God has spoken, but because its truth convinces." Thorough faith, that is, can come only with understanding, an understanding which has been made consistent by the rooting out of all contradictions, no matter how sacred the authority. Such is Abelard's creed, the purpose of education, and the intellectual hope of man.

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[16] *Introductio,* II, 7, col. 1054 C. Quoted from Sikes, *ibid.*, p. 54.

Bernard preached humility and faith and love, the insignificance of man who depends wholly upon God. What, then, did he think of a mind that could, in its self-conceit, assert:

> . . . we utterly forbid that custom be ever set above reason, that anything be ever defended because it is custom, but because it is reason . . . [17]

Bernard thundered back:

> His life, his conversation, and his books prove that Peter Abelard is a persecutor of the Catholic faith and an enemy of the cross of Christ.[18]

But the sympathy of other ages is more with Abelard than against him. Saint Thomas Aquinas, the greatest Scholastic theologian, under the influence of Aristotle, just then rediscovered, was more the rationalist and empiricist than the mystic. The Renaissance, with its awakened interest in the world of *human* affairs and in the ideas of Greek and Latin culture, turned afresh to external experience and to reason; for these seem to represent the more common faiths of men.

THE RENAISSANCE

Saint Bernard's vigorous doctrine of humility and love of God as the pathway to truth, and as the aim of all learning, gave way to the rationalism of Abelard and Saint Thomas. But this rationalism later doomed itself by dialectical extravagances. Discussions grew between Dominicans and Franciscans, between Thomists and Scotists, discussions which were in many cases out of touch with the life of this world. The great hope of medieval rationalism had been the uniting of revealed truth with an understanding based on reason. This hope, which had so strongly inspired Abelard and Saint Thomas, was betrayed when the growth of logic provoked only a tumult of idle controversy.

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[17] *Letters to Heloise,* No. VIII. "An Institute or Rule of Nuns." Translation by Moncrieff, *op. cit.,* p. 220.

[18] *Epistle* 331. Quoted from McGiffert, *op. cit.,* II, p. 224.

Against this spirit, a new temper arose. In the latter half of the fifteenth century, Northern Europe felt the growing interest in pagan, classical literature which had started in Italy a century before, and which was coupled with a revived intellectual enthusiasm for the visible and tangible world. This change in temper is generally considered the essential factor which marks the Renaissance. On the philosophical side it gave rise to a new humanism, not so much the complete intellectual humanism of Plato and Aristotle, as a moral humanism.

ERASMUS

The most famous humanist of northern Europe was Erasmus. His ideas on education are set forth in a number of works.[19] We may summarize the essential beliefs here. Unlike the Greek or medieval writers, Erasmus believed in the equal education of everyone, girls as well as boys. This education, with a classical training beginning at seven, must include primarily a knowledge of the Greek and Latin writers, both Christian and pagan. Teachers should win pupils by love and sympathy rather than coerce them by blows. Latin should be learned as a live language to be used and understood by all, not as an exercise in grammar. Erasmus condemned, for example, the abbot who, lest his monks surpass him in knowledge, preferred that they learn Latin without understanding it.[20] He prescribed pictures, stories, games, and the like for teaching children, though these devices must be recognized only as means and not as ends in themselves. ''There is only one mnemonic art, and it has three rules: understand, arrange, repeat.''[21]

The *gentle*man, with all that this term implies, became the ideal of humanistic training. But for Erasmus, the gentleman must also be a Christian. In his *De Civilitate* he stresses the importance of piety, good manners, the moral duties of a Christian life, and the learning in the liberal arts as requisites for the accomplishment of this ideal. Man is still Aristotle's rational animal, but he is distinguishable from other animals not only by his reasoning ability, but by his courtesy and Christian kindness. Erasmus had no desire to break with the Christian or even with the Catholic tradition. He merely wished to reinterpret these more nearly according to the intention of Jesus.

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[19] Especially *De Pueris Instituendis, De Rationi Studii,* the *Colloquies, De Civilitate,* and *Enchiridion Militis Christiani.*

[20] See *Colloquies,* XVI, "The Abbot and the Learned Woman."

[21] Quoted from Percival R. Cole, *A History of Educational Thought* (Oxford University Press, London: Humphrey Milford, 1931), p. 189.

Education, as conceived by Erasmus, is primarily neither for the creation of dialecticians nor mystics, but for the development of moral virtues, kindliness, humaneness, tolerance. Erasmus sought direct acquaintance with Greek and Latin literature for the sake of a broadened outlook on the world. It is true that Abelard had also advocated a return to original sources, but rather for the sake of clarifying the understanding of the Scriptures and removing contradictions. Abelard's faith in reason is replaced by a faith in a liberal and tolerant attitude of mind, rational more in the sense of non-emotional than in the possession of a strict logic. The new ideal of the cultured gentleman changes the emphasis of education from a part of man—the intellect—to the whole behavior of man.

As with Abelard, there is a similarity and a difference when we compare the ideal of Erasmus with that of Saint Bernard. Erasmus saw Christianity through the personality of Jesus and the supreme importance of love. Love, prayer, and knowledge are all-powerful in fighting sin and superstition. At first glance this seems quite like the teachings of Bernard. But there is a difference. Erasmus was genuinely invoking love of neighbor and love of fellow men. There is here none of Bernard's intolerance toward heretics. The burning zeal, the faith in asceticism, the deep humility toward God and pride toward men which we found in Saint Bernard are lacking in Erasmus. Again, it is the cultivation of the whole of man, his manners and his knowledge as well as his devotion or love, toward which Erasmus would direct education. The ideal of the well rounded, gentlemanly, and tolerant individual is in many ways the gift of Renaissance humanism in general and of Erasmus in particular.

MONTAIGNE

The Renaissance humanism of Erasmus with its tolerance and sympathetic understanding of man's nature could not withstand the onslaughts of religious conflict. The sixteenth century closed amidst the bloodshed caused by Christian fighting with Christian, Protestant with Catholic, sect with sect. In such an atmosphere there was little room for Erasmus' ideal of tolerant brotherly love. Erasmus died in poverty. Many of his followers had deserted him. Was his ideal to die with him?

In the midst of this battle there appeared a man who was supremely disgusted by the sight of the struggle, who strove to remain aloof and to appraise dispassionately human nature both for what it was and for what it might be. He was the French humanist, Michel de Montaigne, born only three years before the death of Erasmus. Montaigne lived until 1592, not quite long enough to see Henry of Navarre put a temporary end to the religious wars in France.

Erasmus' pious hope that Latin would become the common language of all Europe might have succeeded if more men had followed the example of Montaigne's father, for he had his son taught Latin before French. But as Montaigne has himself said, this Latin was of no use in conversing, since no one else spoke it apart from his tutor and his family. Nevertheless, this early training in Latin gave Montaigne a tremendous advantage, since it enabled him to read classic authors with an ease and familiarity that most of us enjoy only with writings in our native tongue. While other boys were studying exercises in Latin grammar, Montaigne was reveling in the works of Horace and Cicero.

Montaigne's ideal of education is similar to that of Erasmus. He had little use for grammarians and logicians (who were still strongly entrenched in the schools). "Our object [in education]," he tells us, "is to make a gentleman and not a grammarian or logician." Grammar and logic to him were remnants of the tyranny of medieval dialectic, of the trivium, no longer useful or respected. More strongly than Erasmus, he praised the broad-mindedness of the ancient Greeks and Romans. With Aristotle, he insisted on the well-rounded man as the goal of education. "It is not a soul, it is not a body that is being trained: it is a man; they must not be separated."

To train the whole of man, this was the plea of Greek humanism too. But Plato emphasized the intellect, and Aristotle strongly felt its attractions. Montaigne, a great devotee of classical culture, invoked above all else man's right to think, but it is a thinking not of the mind alone; for soul and body are not separable, he has said. It is in nature, and especially in human nature, as in a sort of mirror that every individual finds himself reflected and comes to know himself better. Observe others and reflect, know thyself by watching others, this was Montaigne's highest principle of learning.

> He [the student] will sound the depths of every man: a neatherd, a mason, a passing stranger; he should utilize and borrow from each according to his wares, for everything is of use in the household; he will learn something even from the follies and weaknesses of others.[22]

Of all the works of antiquity Montaigne had an especial fondness for Plutarch's *Lives;* for in these interpretations of the characters of great men Montaigne saw the source of a philosophy of life. The good and the bad, the upright and the crafty can all be discerned in the reading of biography.

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[22] *The Essays of Montaigne,* Book I, Ch. 26, "Of the Education of Boys." Translation by E. J. Trechmann (London: Oxford University Press, 1927), I, p. 169.

This leads to the most important of all knowledge: ethics. As Montaigne says of every pupil:

> For it seems to me that the first ideas with which we should soak his mind ought to be those which regulate his conduct and understanding, which will teach him to know how to die well and live a good life.

And not until this is learned will he continue his education.

> After he has been taught what will make him wiser and better, his tutor will explain to him the nature of Logic, Physics, Geometry, Rhetoric, and his judgment having been already formed, he will soon master the science which he has chosen.[23]

Socrates became for Montaigne the true saint. Erasmus had dared call Socrates ''Saint,'' though quickly muttering a Christian prayer to cover up his pagan inclinations. But for Montaigne there was no longer sufficient devotion to Christianity to modify his praise of the Greek humanist. Montaigne's ideal of learning is almost exactly that of Socrates' famous method. It is to discourse with one's tutor, and to be conducted into the delights of philosophy, as Socrates had conducted the youth of Athens. With Socrates and Plato, Montaigne impugned rote learning and the tricks of sophistry. For Socrates and Plato this was directed against Homer and the traditional education. The butt of Montaigne's invective was the Scholastic remnants and their disputants. In a world bent on self-conviction of religious belief through slaughter of opponents, Montaigne turned longingly to the world of Athens where men could discourse pleasantly with one another.

Montaigne would thus replace the burning zeal and love of the Christian ideal with the more restrained Greek virtues: temperance, justice, and a sane mind in a sound body. Indeed, his philosophy expresses in many respects the real renascence of Greek humanism. Experience is centered upon the self, and it is this experience with the self which he found most instructive. In the following passage, for example, we see the influence of the famous Greek maxim:

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[23] *Ibid.*, pp. 158-9.

> Now, as Pliny says, every man is a very good subject of study to himself, provided he have the ability to watch himself closely. . . .
>
> For many years now my thoughts have had no other aim but myself, I have studied and examined myself only, and if I study any other things, it is to apply them immediately to myself.[24]

Beyond his humanism, however, Montaigne was a skeptic. His most penetrating query was his famous motto: "What do I know?"[25] Yet his skepticism, it must be noted, is not a skepticism of despair so much as an appeal for the privilege of free thought and free investigation, untrammeled by a narrow theological view. Over the question of knowledge, thus squarely put, a new controversy arose; for a growing emphasis on observation, present already in Montaigne, was to challenge both mysticism and rationalism.

MODERN IDEALS

The seventeenth, eighteenth, and nineteenth centuries have seen many crosscurrents of thought in educational matters, as elsewhere. Nevertheless, a strong and relatively uniform undercurrent is discernible, an undercurrent which stems from Greek and Renaissance humanism. The emphasis which Montaigne gave to observation and self-study introduced a growing belief in the need for shaping education to all manner of external requirements, and to the proper development of the *individual.* The modern tradition has increasingly stressed the practical and utilitarian side of education. It is this tradition which passed from Europe to North

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[24] *Ibid.,* Book II, Ch. 6, "Of Preparation." Trechmann translation, I, p. 365.

[25] *Ibid.,* Book II, Ch. 12, "Apology for Raimond Sebond." Trechmann translation, I, pp. 428-561 (especially p. 526).

America, and which has manifested itself in so many ways in our own country during the present century.

JOHN LOCKE

Locke, an Englishman of the seventeenth century, developed a philosophy of education in many respects similar to the ideal of Montaigne. But Locke's influence has been greater for us; for his works were widely read, and his high reputation as a philosopher and political theorist lent added weight to his educational writings.

In his most famous treatise on education, *Some Thoughts Concerning Education,* Locke has given us what might be termed a ''manual'' for the proper upbringing of the sons of the gentry. In general, his advice is limited to this class, as he confesses at the outset.[26] Beginning with earliest infancy, his first concern is for the health and physical welfare of the child. Locke also stresses the need to mold character when it is young and pliant, eradicating harmful desires before they become habit, and never indulging the child in his unreasonable whims. Here, as with Plato, concern for physical and moral health is paramount.

Locke was deeply concerned with the matter of discipline, already touched upon by Erasmus and Montaigne. Punishments are appropriate to young children only, for as children become more reasonable and tractable in their behavior, severities should be relaxed. A father may be stern with a young child who still lacks proper judgment, but he should be an intelligent companion to an older child who has developed an ability to understand. Whipping is only a last resort, and reasoning (suited, of course, to the child's mental age) should always be attempted first. It is this emphasis upon being reasonable with children which perhaps most strongly distinguishes the Lockian ideal of education.

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[26] See *Some Thoughts Concerning Education,* par. 6: "I have said *He* here, because the principal aim of my Discourse is, how a young Gentleman should be brought up from his Infancy, which in all Things will not so perfectly suit the Education of *Daughters;* though where the difference of Sex requires different Treatment, 'twill be no hard matter to distinguish." Edited by R. H. Quick, revised edition (London: Cambridge University Press, 1927), pp. 3-4.

Locke paid more attention to the matter of habits than did his predecessors. He saw the possibility of utilizing habits in the best type of training. Not that he advocated rote memorization, but rather an automatic conditioning of physical and mental habits, so that the responses would be spontaneous. This is illustrated, for example, in the matter of language, which he believed should be learned directly rather than by grammatical rule. He realized, moreover, that the child is a great imitator, and he therefore puts the burden of teaching behavior upon the good manners of the parents and tutors. It is, for Locke, perhaps more important that a tutor have real acquaintance with the faults of human behavior than that he be thoroughly versed in scholarly subjects. And, above all, his own manners should be those of the well bred.

The method of instruction is still that of pleasant and familiar discourse concerning the matters to be studied, not reading of lectures, or copying of dictations. In this connection it is well to remember Locke's more general philosophy in which he treats the ''human understanding'' as instructed principally from external experience, or environment. The beginnings of human knowledge come from the ''imprinting'' of ideas upon the mind. Of course, he does recognize mental operations, especially that of abstracting, as a second source of knowledge.[27] But Locke's concept of instruction differs greatly from the Platonic, rationalist tradition which would have us consider teaching as primarily the eliciting of innate wisdom.

Locke treats the course of study with great detail. A few points of special interest may be mentioned in this connection. Reading, he says, must be taught early, and if possible as a game, in order to create an eagerness for learning. He suggests the construction of a ball with letters upon it. First comes reading, then writing, then drawing. As for languages, French must be started as soon as English can be spoken, and Latin when French is fairly well mastered. It is, however, ridiculous to teach Latin to future tradesmen, or to anyone who will never have occasion to use it. Moreover, Locke strongly recommends the direct method even for the learning of Latin. Grammar, he thinks, is little more than a waste of time for all except the professional scholar. Essays ought to be written in English and not in Latin; therefore, if any grammar is studied, it should be English. It will be noted that Locke had little use for the customary school education of his time, which was centered largely upon the learning of Latin and Greek.

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[27] See *An Essay Concerning Human Understanding,* Book II.

Other subjects which Locke advocated are: geography, arithmetic, astronomy, geometry, history, ethics, law, natural philosophy (science), and the Scriptures, with a history of the Bible as explanation. Logic and rhetoric he deplored when taught as a series of rules for reasoning correctly and speaking well. Better it would be to read some fine examples of argument and oratory. In addition to the foregoing subjects of a rather traditional sort, Locke was bold enough to recommend, for his gentleman, instruction in dancing, fencing, music, some manual trade, and accounting. (It is this stress upon useful abilities which gives Locke's treatment of the subject of education its truly modern character). To top off a proper education, the young gentleman should travel abroad, after he has become mature enough to be master of himself.

The purpose of education in the case of the gentleman may be characterized here as following largely the humanist tradition of a well rounded personality, virtuous and wise, well bred, dignified, and sufficiently aware of his surroundings to understand a little of the world in which he lives. Locke tends to break from this tradition in stressing habit and practice, the method of imprinting behavior rather than eliciting it, and the need for genuine utilitarian abilities.

ROUSSEAU

Montaigne in the sixteenth century and Locke in the seventeenth both emphasized as ideal that sort of education which contributes to the development of genteel and cultured qualities. Jean Jacques Rousseau, a French-Swiss of the eighteenth century, startled the world by denouncing civilization and "culture."

Montaigne and Locke had believed in the need for restraints and a certain amount of coercion, especially in early training. While deploring the use of the whip, Locke nevertheless recommended the forming of character through authority and discipline. Rousseau, however, insisted that the ideal upbringing should be free from all unnatural restraints. If only man's natural impulses are allowed to develop, unchecked by social convention, men may again become the emotionally spontaneous, genuine, and noble beings that were our uncivilized ancestors. The only permissible restraints are those of nature and necessity.

Rousseau has painted for us in his *Emile* the way in which such an upbringing is to be carried out. Nature is, of course, the real teacher. Natural experiences must therefore be allowed to have full sway over the individual. The only function of the tutor is to aid nature in this enterprise by augmenting now and then the lessons of experience. For example, it is not by globes that children are to learn geography, but by drawing maps of actual terrains; and it would be better if this were forced upon them by some accident, such as that of becoming lost, so that necessity could indeed be the mother of invention.[28] Experience, Rousseau thinks, is needed to imprint a lesson securely; and the knowledge that one is self-sufficient he considers the first and greatest accomplishment. He idealizes, for example, the self-reliance and ingenuity of Robinson Crusoe.

Rousseau further disagreed with Locke concerning the possibility or propriety of reasoning with the child. According to Rousseau, the child-mind must be allowed to grow, free from prejudices, in its own uninhibited way. Only when its reasoning powers are developed, not earlier than twelve years of age, should subjects of a rational nature be introduced. Since he considers a knowledge of good and evil to be rational, and since the young child is not rational, there is no sense in attributing good and evil to children. Destructive tendencies of boys are simply due to their active nature. Right and wrong should not be taught by imperious command, but rather by showing the child, through his own experience, the unfortunate and serious consequences of certain acts.

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[28] See *Emile,* Book III.

Rousseau goes so far as to say that it is better to waste time than to force education. Young children cannot reason, since a familiarity with a variety of experiences is not yet theirs. They will be able to reason only about the things with which they are acquainted, so that it is better to train their senses and perceptive powers first, in order to give them a wider variety of experiences. "Although memory and reason are wholly different faculties, the one does not really develop apart from the other."[29] Thus reason must have a substantial basis of recollections if it is to succeed later on.

After the age of twelve, Rousseau finds the mental faculties well enough developed for intellectual purposes. It is at this point that the young boy will learn to map his locality, that he will learn of the rest of his world by following his natural curiosities. All science will be unfolded before him, for he will be investigator and discoverer on his own account, not learning by rule but by practice.

The account Rousseau has given us in the *Emile* may appear overdrawn. The tutor, whose duty it becomes to arrange experiences for the pupil rather than to instruct him directly, would have to be a person of extraordinary imaginative powers and abilities. But a great deal of Rousseau's profound influence may be traced to this very overemphasis which has so heightened his contrasts.

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[29] *Ibid.*, Book II. Translation by Barbara Foxley, Everyman's Library (London: J. M. Dent & Sons, Ltd., 1928), p. 71.

No doubt the greatest significance of Rousseau's writings, certainly in his social philosophy in general, is found in his emphasis on the equality and intrinsic worth of individual human beings. Everyone, whether butcher or priest, deserves equally the dignity which is due our species. This idea was already anticipated in the humanist's faith in human nature, the faith which Erasmus found so significant in the teachings of Jesus. But with Rousseau it bursts into the full doctrine of the equality of man, not just an equality of souls before the bar of divine justice, but an equality of man's rights in man's own courts. Of these rights one of the most important is the right to an education. No longer are we limiting our need for education to a certain class or group, as with Montaigne and Locke. The equality of the individual destroys the class idea. It is now an education for everyone alike, not for the gentry or the scholar. Rousseau was greatly responsible for the ideal of democratic education which has had so tremendous an influence upon American thought. Where Montaigne and Locke suggest different types of education as appropriate to different classes, Rousseau allows only the proportioning of education to the different periods of life.

Montaigne and Locke directed the attention to the need for observation and experience. But with them this was primarily social experience. Even with Locke the environment which plays so important a role in the teaching of the young gentleman is one of fathers, governors, and tutors. With Rousseau, on the other hand, the teacher is really a direct experience with man's *natural* environment. With Locke, learning is primarily a matter of *instilling* good habits into the pliant mind of the young. With Rousseau it is rather the *developing* of the innate tendencies and capacities of the child. Thus, in this last respect, and despite his other innovations, Rousseau falls back into the general Platonic tradition.

JOHANN FRIEDRICH HERBART

The German philosopher, Herbart (1776-1841), may be said to have been the first to conceive of a science of pedagogics, based on adequate sciences of psychology and morals. While realizing the limitations of knowledge in these fields, and not pretending to the accomplishment of this goal himself, he devoted much of his energies to the laying of foundations for such a science.

Herbart rather ridiculed Rousseau's ''nature man'' as an uncultivated misfit, who at the expense of the whole life of the tutor, learns something which is not so difficult to man: self-preservation. Locke's gentleman, he acknowledged, would be very capable of getting on in social affairs, but there is a danger that he may ''know the world without loving it.''[30] There is too little development of sympathy and taste; and it is to this matter that Herbart directs our attention. Objective knowledge, he thought, is quite different from sympathetic knowledge, both of which must be learned concurrently.

The job of the teacher is that of training the *individuality* of the pupil without creating a misfit of him. To this end the personal interests of teacher and pupil must be interwoven, inspiring the pupil with the enthusiasm of the teacher. With Pestalozzi, whose work he greatly admired, Herbart agreed that instruction should be fitted to the stages and needs of the child. But Herbart, believing in a strong bond of sympathy and comradeship between teacher and pupil, deplored Pestalozzi's aloofness.

Herbart's psychology, somewhat in the fashion of Locke, constituted the mind from the reproduction and association of sensations, though he added that the mind as a reality interacts with other realities. Herbart's is a rational as well as empirical faith, with the result that he tries to work

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[13] *Allgemeine Pädagogik,* intro. Translation by Henry M. and Emmie Felkin, *The Science of Education* (Boston: D. C. Heath and Company, 1896), pp. 79-80.

out a mathematical set of relations governing mental interactions. He believes the will to be free in so far as it is self-controlled, or capable of restraining one desire in order to alter the direction of the general desire.

The task of the teacher is that of shaping the moral judgment or "taste." This moral taste grows naturally in the individual, as in the race, if the circle of thought is built up through many and varied experiences. The teacher is needed as an example of higher developed taste, and as one who can best arrange the experiences and the subject matter for the student to develop his own taste. Herbart himself found Homer's *Odyssey* ideally suited as an awakener of interest because of its boyish appeal. Beyond the matter of awakening new vistas and intriguing the mind, Herbart emphasized the need for logical connection and presentation of lessons, and for procedure by observation (*Anschauung*), analysis, and synthesis. But above the arousing of interest and the organized procedure, it is the confidence in the ability of the teacher to aid in the pupil's discovery of a common human moral judgment which has evoked Herbart's most inspired passages.

HERBERT SPENCER

We may allow ourselves only a brief glance at the educational ideals of Spencer. The writings of the English utilitarians and French positivists and the work of Darwin had intervened since Rousseau and Herbart. Under these influences Spencer created a composite utilitarian-evolutionary ethics which naturally governs his educational philosophy.

Considering first the evolutionary portion of this ethics, we observe that it utilizes the familiar Darwinian themes of survival of the fittest and adaptation to environment. The first lesson of the doctrine of evolution, Spencer insists, is that human beings need to know better how to survive. Survival is proportionate to proper adaptation or conformity to nature, and for man this adaptation results primarily from an accurate knowledge of biology, medicine, and the maintenance of health. That these sciences were not properly taught in the schools of his day was for Spencer the supreme failure of education.

Knowledge of self-preservation becomes, therefore, the first aim of an ideal education. The second is to teach the means of acquiring those necessities of life which indirectly contribute to self-preservation. The third is to teach the knowledge of rearing and disciplining offspring, thus improving the race. The fourth aim is to improve knowledge of proper social and political relations. And the fifth is to instruct the children in the gratification of their tastes and feelings, that is, in art and literature. Of the arts, literature, and pure intellectual enjoyments, Spencer says: *As they occupy the leisure part of life, so should they occupy the leisure part of education.*

The utilitarian and pragmatic ideal, a characteristic English bias found already in Locke, is expressed in Spencer's demand for practical education. But Spencer means by ''practical'' the sciences of man and nature which best enable man to control himself and his environment. Spencer idealizes the applied rather than the pure sciences, since the latter must be esteemed more for the sake of ''intellectual enjoyment,'' than for practical results. And even beyond this, any science is practical in a moral way; for Spencer lauds the scientific attitude as teaching the virtues of perseverance and sincerity.

Spencer finds the inductive method of science the natural and ideal way to knowledge. From the simple to the complex, from the concrete to the abstract, from the empirical to the rational—such is the direction in which learning must proceed. Learning in the individual should imitate the order of learning in the race, and so conform to the natural mental growth of the child. Self-development, as with Rousseau, should be encouraged wherever possible. In addition, a ''pleasurable excitement'' ought to accompany all studies. Successful teachers must have judgment, inventiveness, intellectual sympathy, and a faculty for analysis. Quoting Montaigne. Spencer denounces rote learning. But memory is more useful when the facts remembered are scientific than when they are linguistic, for languages have accidental connections, whereas in science the correlations are necessary.

Spencer's great confidence in the teachings of evolution and in the method of science are characteristics of the nineteenth century in which he lived. Today we have had a chance to estimate more carefully these enthusiasms, and we find that, as with the Greek faith in reason, they reflect an over-optimism. In most of his ideas on education, however, Spencer has but continued the beliefs of Montaigne, Locke, Rousseau, and Herbart. With each of these men there is a new perspective, a new emphasis; but throughout them all run common strains, such as observation, utility, and conformity to nature, which have created the outlines of our modern ideal of educational procedure.

SUMMARY

The dominant theme of the various educational philosophies we have examined is the emphasis upon the development in the individual of a full, well rounded life. The Greek motto: Know Thyself, was expanded by Plato to include a knowledge of the cosmos itself as a prerequisite to the knowledge of man. He idealized that part of human nature which he believed capable of accomplishing so great a task, namely, the intellectual and rational faculties. Not only for the individual, but for human society as well, the harmonious and rational became the Platonic ideal. With Aristotle there is perhaps more emphasis laid upon other human capacities, and upon the ordinary economic and social needs, but Aristotle also found in reason the supreme hope of man.

With Christianity another influential tradition is introduced into European philosophy. Whether through the mystic way of Bernard, or through the critical rationalism of Abelard, the end of life and education is the soul's salvation. This may mean a desire for eternal life, or it may mean, as it more often did to the learned, a desire for an improvement of character and understanding in accord with divine wish. It is natural, of course, that in stressing the care of the soul man's bodily nature is allowed to suffer.

The rediscovery of Greek ideals, which influenced the Renaissance so strongly, brought with it a renewed recognition of the importance of human life in all its capacities. Thenceforward, the tradition of educational philosophy came more and more to stress a practical training in all the abilities which men possess, until the one supremely common trait of all mankind, life itself, was proclaimed the central focus of educational needs.

In every case, however, a knowledge of the world or universe has been regarded as essential. Whether it come through reason, or through mystic insight, or through scientific investigation, it is this understanding toward which educational ideals have ultimately aimed. We must beware lest we find in the historical changes of emphasis some natural progression of intellectual development. Each phase produces its particular enthusiasm, and human nature needs its enthusiasms, even over-enthusiasms. The better wisdom would indicate that all outlooks are helpful perspectives of the world in which we are situated. An education which neglects reason, or intuition, or observation will surely be in some measure lacking.

Reading List

A. From the point of view of educational theory:

Cole, Percival Richard. *A History of Educational Thought* (London: Oxford University Press, 1931).

Eby and Arrowood. *The History and Philosophy of Education Ancient and Medieval* (New York: Prentice-Hall, 1940).

Eby and Arrowood. *The Development of Modern Education* (New York: Prentice-Hall, 1934).

B. From the point of view of general philosophy:

Gomperz, Theodor. *Greek Thinkers* (London: John Murray, 1914). Especially Vol. III, Chapters 12 and 20; and Vol. IV, Chapters 17, 20, 26, 31, and 34.

Höffding, Harald. *History of Modern Philosophy* (London: Macmillan, Ltd., 1924). Especially Bk. I 1-4, Bk. IV 1, Bk. V 4, Bk. VIII C, and Bk. IX C 2.

Taylor, H. O. *The Mediaeval Mind* (London: Macmillan, Ltd., latest edition). Especially Vol. I, Chapter 18, and Vol. II, Chapters 26 and 37.

Thilly, Frank. *A History of Philosophy* (New York: Henry Holt, 1914).

VII. THE AMERICAN HERITAGE

THE American of today is the heir of three centuries of territorial expansion and the exploitation of great economic resources, increasingly marked by a struggle between the haves and have-nots over the distribution of the proceeds, a struggle arising from the system (or lack of system) of economic individualism; he is the heir of a long history of development of the ideal of democracy, the growth of the spirit of nationalism and a deepening feeling of humanitarianism. In addition he is the troubled heir of a conflict between the majesty of the law and the inherent desire for individual freedom; and of the traditional theory of national political isolation in world affairs contending with the spirit of internationalism and imperialism. The intermingled influences of these several forces have shaped the character of the nation, and they constitute the elements in the well from whence flow the disturbances that agitate the surface of American life today.

Territorial expansion from the Atlantic to the Pacific Ocean was begun when the first settlers landed at Jamestown and Plymouth. Their initial trials and tribulations overcome, they and their successors were destined to conquer a country of great size and wealth. But the ultimate significance of their arrival lay hidden from their eyes behind the impenetrable veil of the morrow; they were only conscious of the immediate barriers of the moment, the redman and the difficulties of the wilderness, and these gradually yielded to the aggressive advance of the pioneer. The redman sold his land "for a song," a transaction sometimes preceded by war with the white man, and he unconsciously aided in his own conquest by revealing the utility of parched corn for distant travel. Then a third obstacle to the building of the United States appeared in the persons of other European contenders for the prized territory.

The greatest struggle for supremacy occurred between the French and the English. The specific stakes at issue were the Mississippi Valley and bits of territory bordering Canada, if not the whole of that region. The *coureurs de bois* advanced up the Saint Lawrence River, traversed the Great Lakes, and launched their canoes on the waters flowing into the western country. The English debated ways and means of stopping this movement, and then precipitated that final conflict when George Washington defended Fort Necessity in 1754. The war was waged with shifting fortune and finally brought to a successful conclusion for the English in the Treaty of Paris, 1763, when the western boundary was fixed at the Mississippi River, and the dominance of Anglo-Saxon culture was assured in the future United States.

With the winning of independence from Great Britain a generation later the westward movement of settlers rapidly increased and the international struggle for territory continued. The Spanish in New Orleans, the gateway to the Mississippi Valley from the sea, were undesirable neighbors since the free and uninterrupted navigation of the river to the ocean was considered essential to the prosperity of the westerners. Spanish Florida was also a source of irritation as a center of foreign troublemaking among the southern Indians, and as lying across other rivers navigable to the Gulf. A partial solution to these problems was offered when Napoleon sold the Louisiana Territory to the United States in 1803, with questionable right, and Jefferson completed the deal with grave doubts as to the constitutionality of his action.

Boundary disputes soon arose from this purchase and were settled in various ways. In 1810 the inhabitants in part of Spanish West Florida ''revolted.'' The movement was approved by the United States Government and its authority was extended over the territory. When the American ambassador to Russia explained the situation to the Emperor, he replied, ''Everybody is getting a little bigger, nowadays.'' The rest of Florida was purchased in 1819. So two problems had been solved, and not entirely by the ingenuity of statesmen: ''God and nature have destined New Orleans and the Floridas to belong to this great and rising Empire,'' Senator Jackson of Georgia had stated.

Expansion continued, and ''God and nature'' were not the only factors; the West had a ''piratical way of looking at neighboring territory,'' in the words of Theodore Roosevelt. Not all westerners, of course, were so minded, but there were enough to upset the work of John Adams who had surrendered by the Florida Treaty of 1819 any claim that America might have had to Texas. While President of the United States he tried to buy the territory, without success, but Andrew Jackson kept the project alive until it was finally completed in a more spectacular manner when residents in that region, with the help of the ubiquitous American adventurer, successfully revolted against Mexico. When the Lone Star State entered the Union in 1845 the goal of the United States Government for a generation had been attained, but new leaders had also appeared and their eyes were now directed at more distant horizons. President Polk especially wanted California, or at least a good harbor on the west coast, and was not easily deterred from satisfying that ambition. With the shedding of ''American blood on American soil'' as an afterthought for declaring war on Mexico, a successful conflict was waged with our unfortunate neighbor, ending with the cession of the Territories of New Mexico, California, and Utah. Meanwhile, the hardy American settlers in the Willamette Valley of Oregon had pushed the British Government into making a peaceful division of the territory. The dynamics of Democracy *en masse* was keeping pace with the potency of the presidential prerogative.

What might the limits of expansion be? The annexation of Texas, the *New York Herald* stated, "may only precipitate the subjugation of the whole continent, despite all of the opposing efforts of the despotic dynasties of Europe." And this was no idle boast. In 1853 the boundary line was pushed southward by the Gadsden Purchase, and the annexation of Cuba, long in the minds of some American statesmen, was openly discussed. Its possession would be justified "by every law, human and divine," when our national interests required it, according to the American ministers to the principal European capitals. But the mid-century fever for expansion cooled, paradoxically, in the fires of the Civil War, a holocaust that served to temper the bonds for holding together the ever-expanding empire. And after the war the competition of interests distracted attention from territorial expansion. The purchase of Alaska, "Seward's Folly," was consummated, but President Grant's frontal diplomatic assault against Santo Domingo was frustrated by Senate opposition. The end of an epoch was reached; the puny settlements along the Atlantic seaboard had amazed the world with their vitality; Americans now needed time to visualize in all its immensity the vast extent of their country.

AN ECONOMIC RESERVOIR

The territory of the United States is a tremendous reservoir of natural resources located in a part of the world conducive to physical vigor, the temperate zone. The climate varies from freezing winters in the northern part to the balmy winters in the South. While the New Englander stokes coal burners for warmth, the southwesterner can recline in comfort on the south side of an adobe wall. Sufficient rainfall for farming occurs east of the 98th parallel and in the higher mountain areas of the West; elsewhere the husbandman lives in fear of drought and milady worries about a dry skin. The altitude varies from 250 feet below sea level in Death Valley to the summit of Mt. Whitney, 14,496 feet high, and nature permits the ripening of oranges and the flowering of roses along the base of a snow-clad mountain.

In order to win a living under favorable climatic conditions, the American needed only to apply his strength to the task, and he was fruitfully rewarded: the banks of Newfoundland yielded cod and halibut to the nets of New England fishermen; the shipbuilder dotted the seas in the early nineteenth century with the product of his skill; and the lumberjack cut millions of feet of timber in the Northeastern States, along the Great Lakes, in the Pacific States and in the South for building purposes. These forests, however, did not always come to a serviceable end because fish, timber, and commerce yielded pre-eminence to the raising of crops in the earlier years. The people, pushing westward from the eastern seacoast found trees an obstacle to the use of land, and girdled them, Indian fashion, to produce a slow but sure death. No thought was given to conservation; the timber was exploited for immediate prosperity, and either grain fields or dead stumps marked the westward movement through the forest country. Young America was thoughtless and wasteful; the interest of the individual was paramount.

About ninety per cent of the people in 1790 were interested in the cultivation of the soil. Small scale farming prevailed in New England and the Middle States; in the South the large plantation developed for the growing of rice, indigo, tobacco, and cotton. The last named overshadowed its rivals in the nineteenth century after the invention of the cotton gin by Eli Whitney in 1793, which made possible the profitable growing of the short staple cotton. The Piedmont and the Gulf States developed rapidly under the new stimulus, and slave labor became fastened on the South.

CONQUEST OF A CONTINENT

The predominant agricultural interest of the American made the lure of free or cheap land a constant magnet until the shore of the Pacific was reached. The homesteader, the land speculator, the debtor and the adventurer, all looked to the West for a new start, usually in land.

> Come forth from your cities, come out to the West; "The world is too crowded!"—pshaw! come and *take* land.

When the pioneer had cut his way through the forests and reached the trans-Mississippi country, he faced a new problem of mastering a semi-arid region, and he also found new sources of wealth. The needs of the armies in the Civil War led to the development of the cattle trade in the Big Bend country of Texas, where wild Spanish longhorns were rounded up and driven to market. In a few years the grassy country from Mexico to Canada was a cattle range and a new industry had been born, romanticized by the ten-gallon hat, the six-shooter, and the song of the cowboy. But control of the plains area was soon challenged by the farmer, aided by the invention of the windmill to draw water from subterranean sources and the barbed-wire fence to protect growing crops from range cattle. Where rainfall was insufficient, irrigation was resorted to, and in a comparatively short time every state west of the 102nd parallel had one or more of such projects.

Contemporary with the rise of the cattle industry, mineral wealth was exploited in the Far West. The discovery of silver in Utah Territory in 1859 started a train of bonanzas and the creation of millionaires to startle city folk with the splendors of sudden riches. The prospector with pack and burro trudged the country from New Mexico and Arizona to the Canadian border, and from the eastern side of the Rocky Mountains to California, maintaining mining as a permanent addition to the national economy. And in the same year of the Comstock discovery (1859), the liquid gold of Pennsylvania was first drawn in quantity from underground and the oil industry was established as a major business.

The economic development of the country was accompanied by the need for transportation; otherwise farming would have remained largely at the subsistence level, the mining and cattle industries would have been impossible on a large scale, and petroleum would have been left in the earth. The inventive mind, the skilled hand, and bold imagination solved the problem: the pioneer trail was broadened into a highway to accommodate the Conestoga wagon; canals were excavated to circumvent the laborious climb over hills; the steamboat was launched on western waters and inspired the saga of the Mississippi; and the wheezy woodburning locomotive of the 1830's grew into a streamlined monster that annihilated distance with startling speed.

COMMERCIAL DEVELOPMENT

The application of steam to machinery made possible the modern factory with its mass production of goods; high-speed transportation made possible the distribution and consumption of those goods in large quantity: the result was the industrialization of the United States and the growth of large cities, the appearance of big business in corporate form with a class-conscious labor group demanding a greater equality in the distribution of income. The strike and the picket line became a commonplace in American life, and the meaning of ''legality'' was a bitter point of dispute. The older sectional strife between agrarian and commercial-industrial interests continued to be a factor in politics, and ''rugged individualism'' reached the peak of its career, revealing its good and bad qualities in stark relief. Domestic conflict once terminated in a civil war; new forces were generating another crisis.

Material development had its effect on the character of the people as well as on their pocketbooks. The quest of wealth, or at least a modest competence for old age, was the keynote of life. Of necessity, the arts and literature played second fiddle in the symphony of the American cavalcade and even the humble flower pot was neglected in the window of the pioneer cabin. Time and energy were spent in cultivating the corn and chopping the wood, in the counting-house and the market place; there was little left for growing flowers and cultivating the mind.

> The Plow-man that raiseth Grain is more serviceable to Mankind, than the Painter who draws only to please the Eye. . . . The Carpenter who builds a good House to defend us from Wind and Weather, is more serviceable than the curious Carver, who employs his Art to please the Fancy.[1]

And two centuries later Woodrow Wilson wrote:

> The obvious fact is that for the creation of the nation the conquest of her proper territory from Nature was first necessary; and this task, which is hardly yet completed, has been idealized in the popular mind. A bold race has derived inspiration from the size, the difficulty, the danger of the task.[2]

POLITICAL DEVELOPMENT

Materialism was rampant, but the people were developing political ideals and practices during the colonial period that led to the adoption of our present form of government based on a written constitution. In theory sovereignty came to rest with the people who delegated limited powers to the Federal Government, distributing them among the three divisions with a system of check and balance to prevent concentration of authority. All powers not delegated to the Federal Government or prohibited to the state governments, were reserved to the states or the people in them. And, in these words it was stated that

> This Constitution, and the laws of the United States which shall be made in pursuance thereof, and all treaties made, or which shall be made, under the authority of the United States, shall be the supreme law of the land; and the judges in every state shall be bound thereby, anything in the constitution or laws of any State to the contrary notwithstanding;

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[1] Quoted by J. T. Adams, *Revolutionary New England* (Boston: Little, Brown, and Company, 1937), p. 32.

[2] Quoted by E. D. Adams, *The Power of Ideals in American History* (New Haven: Yale University Press, 1926), p. 65.

all in keeping with the belief of the fathers of the country that a republic is ‘‘a government of laws, and not of men’’—even a complicated republic, a federal republic, a *dual* form of government.

But a republic did not mean democracy. On the contrary, the theory of democracy ran counter to practice in the eighteenth century when the possession of property was considered essential for the privilege of participating in the political life of the state. However, during the first quarter of the nineteenth century the influence of the expanding West, where the environment minimized social and economic distinctions, promoted the adoption of manhood suffrage. The right to vote came to be considered the open sesame to realizing in fact the truth of the statement ‘‘that all Men are created equal, that they are endowed by their Creator with certain unalienable Rights, that among these are Life, Liberty and the Pursuit of Happiness.’’ This beautiful ideal, the spiritual cement of the nation, symbolized in the right to vote, attracted to our shores diverse peoples who were adopted into the American family as political equals, although a generation or two was required to assimilate them.

The doctrine of equality, of equality before the law, of equality of opportunity, and finally of political equality, was applied to the large majority of Americans. Lest this equality be impaired by government, even by a government of ‘‘limited’’ powers, lest Liberty be infringed upon and the fruits of revolution lost, further safeguards were provided in the Constitution by a Bill of Rights. Thus freedom of speech, of assembly, the right of petition, and freedom to worship according to the dictates of individual conscience, are safeguarded in the fundamental law of the land. Sometimes violated by government, national, state, or local, these rights have never been destroyed; they remain a part of the American way of life.

Under the benevolent eye of a government guided by a *laissez faire* philosophy, inspired by the conception of equality, and stimulated by the right to vote and seek office, the material development of the country was the accomplishment of individuals primarily and of government secondarily. The American relied first upon himself and God, secondly he sought aid from other men, and only as a last resort did he turn to government as the means to an end.

The character of the individual, from the highest to the lowest in the social hierarchy, and in all walks of life, was important in shaping our heritage. The adventurous frontiersman threading his way through the forest, across plains and over mountains, pointing the way for the settler, blazing the trails for future highways and railroads, contributed qualities of courage and rugged individualism; the business man building the corporation, founding charitable institutions, and sometimes corrupting the voters, provided skill in organization and leadership; and public officials often added a touch of ruthlessness in governmental policy. President Polk, a westerner, expansion-minded, strong willed, seized California by force; and the first Roosevelt, forceful, dynamic, and forewarned of what was to come, stood by to profit from the Panamanian revolt by acquiring the Canal Zone. At the same time, however, the preacher of the Gospel, age-old idealist, relieved the monotony and materialism of pioneer life by riding the circuit despite inclement weather and the dangers of the wilderness; and an idealistic backwoods lawyer rose to be President of the United States.

In the struggle to rise from obscurity to prominence, from poverty to riches, to create, build, and develop, all did not do well; some succeeded, but many failed. As the nineteenth century ran its course the struggle became more acute, and the American gradually lifted his view from the individual to society as a whole, seeking the causes for failure. Corruption in government and the widening gulf between poor and rich led to demands for changes that would make possible the realization of the dreams of early America, not merely the pursuit of happiness, but the attainment of happiness, or in more concrete terms, a reasonable degree of economic comfort for all. The American turned his attention to the reform of governmental machinery and tactics. Instead of merely assisting the individual or groups by granting such favors as aid for highway building and subsidies for railroads, government was requested to regulate certain activities, particularly big business, that seemed to block the road to economic democracy. This movement, once started, slowly gained momentum, and finally flowered into the broader policy of governmental activity in the New Deal program of the 1930's.

The New Deal was a far cry from the early American attitude toward economic distress. When the panic of 1819 struck the country, President Monroe and his adviser solemnly agreed that the people

> must work out their own termination. Government can do nothing, at least nothing by any measure yet proposed, but transfer discontents, and propitiate one class . . . by disgusting another. . . . As it is, the arbiter of weal and woe, the healers and destroyers, Time and Chance, must bring the catastrophe or the cure. . . . ''Thy will be done.''[3]

But Americans, even of that date, were not all content to leave solutions to ''Time and Chance,'' and they sought other agents in the form of political leaders. The second Bank of the United States came to be regarded as an obstacle to the welfare of the many and was struck down by Andrew Jackson. ''It is to be regretted,'' he stated in the veto message, ''that the rich and powerful too often bend the acts of government to their selfish purposes.''

However, Americans have had persistent faith in ''government of the people, by the people, for the people,'' and repeatedly the people's leaders have appeared with their answers to problems. The Great Commoner expatiated upon free silver at sixteen to one; Theodore Roosevelt wielded the "big stick" and urged the Square Deal; Wilson, the scholar, spoke softly of the New Freedom and guided some remedial legislation through Congress; and Roosevelt, the Good Neighbor with the New Deal, has attempted the latest answer to the question of how material comfort can be brought to all men in a land of wealth and equal opportunity.

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[3] Quoted by Samuel Rezneck, "The Depression of 1819-1822: A Social History," *American Historical Review,* XXXIX (1933), 39.

CULTURAL DEVELOPMENT

The political and the economic are not the only parts of the American heritage. While colonial disunity was giving way to federal union, and wealth abounded for the taking, the building of a nation in the cultural and spiritual sense was necessary. The cultural might be delayed (it is more truly a product of time), but the development of a national spirit could not be postponed too long, as the Revolutionary Fathers realized. Fortunately, there was a good foundation to build upon. The majority of the colonials were English in language, and in law and custom adapted to the New World environment. To become American they needed a few martial triumphs, a few great men to whom all might point with pride, and some sacrifice of the particular for the general good.

> Each party-view, each private good, disclaim,
> Each petty maxim, each colonial aim;
> Let all Columbia's weal your views expand,
> A mighty system rule a mighty land.

But this clarion call to unity by Timothy Dwight was offset in spirit a few years later by the threat of Josiah Quincy that Massachusetts would secede from the Union if Louisiana was taken into the partnership.

The Declaration of Independence had been issued in the name of the colonies or states united, but united in reality only in outward form; they were divided in interest and sentiment by the spirit of localism. Only years of struggle in establishing a stable political system, in meeting the difficult problems inherited with the responsibility of self-government, in keeping the bitterness of political differences within the bounds of reason, could develop a feeling of nationalism and unity. But that feeling was slowly developed and succeeding statesmen defined it with ever increasing clarity and forcefulness. "We are all Republicans, we are all Federalists," Jefferson said—not with literal accuracy, of course; nor would such unity in politics as he mentions be an entirely unmixed blessing; but the mere thought was a step beyond colonial provincialism. Then came the slogan, "Liberty *and* Union, now and forever, one and inseparable!" The spirit of nationalism was growing; it was the challenge of the North to the feeling of sectional solidarity developing in the South. And when the rivalry of the two concepts led to terrible bloodshed on the field of Gettysburg, the triumph of the greater over the lesser was immortalized in the word "nation" used in the classic statement: "Four score and seven years ago our fathers brought forth on this continent, a new nation. . . ."

The wounds of the Civil War that almost wrecked the Union were slow to heal, but the continued trend toward nationalism was inevitable; common pride developed with common achievement in the freeing of the Cubans, and when World War I broke out, Theodore Roosevelt spoke for the North, the South, the West, when he said, "Let this nation fear God and take its own part."

The building of a nation from the localism of the colonial period was made more difficult by the influx of immigrants and the acquisition of other peoples by conquest. The United States became a vast melting-pot of nationalities differing in language, custom, and historical traditions. The nation-wide problem was met by means of nation-wide institutions, particularly the public school system, designed to prepare citizens for the responsibility of self-government. In the classroom, patriotism was instilled into the youthful mind, both native and foreign born, by glorifying the exploits of heroic Americans, extolling the virtues of Democracy, and by the singing of national anthems. *Hail, Columbia* praised our maritime victors; the defense of Fort McHenry was immortalized in the *Star Spangled Banner;* and *America* taught the spirit of liberty, the basic theme of the American way of life. History was written with fine sentiment, if not always with accuracy; it covered the petty and the grand, the local and the national, and so strengthened the bonds of the nation.

The process of developing a national spirit has made great progress. The first World War period revealed pro-European sentiments among Americans, but leaders met the issue with strong words of warning. Theodore Roosevelt said:

> The larger Americanism demands that we insist that every immigrant who comes here shall become an American citizen and nothing else; if he shows that he still remains at heart more loyal to another land, let him be promptly returned to that land; and if, on the other hand, he shows that he is in good faith and wholeheartedly an American, let him be treated as on a full equality with the native born. . . . Our allegiance must be purely to the United States. We must unsparingly condemn any man who holds any other allegiance.[4]

A generation later the German-American Bund and the Dies Committee on Un-Americanism present evidence that challenges the concept of an American nation; but the reaction to the Pearl Harbor incident that produced the first unanimous Congressional vote for war in our history may justify the conclusion that America has come of age spiritually, and that our few dissident elements can be accepted as a peculiarity of all nations.

THE PRESERVATION OF DEMOCRACY

The theory that American government is one of laws and not of men is not strictly realized in practice. The law on the statute book is usually the law that governs a judge's decision, although that has not always been true; but the law that the individual is most willing to respect is one that appeals to his own common sense judgment, or is in harmony with his own interests. And this has long been true in America. Bacon in the rebellion against Governor Berkeley was disregarding the law, but he was acting in harmony with the interests of the frontiersmen. Smuggling in the eighteenth century was a commonplace form of lawlessness, and the Molasses Act of 1733 was never obeyed, the New Englanders became a race of smugglers, and the most reputable merchants became lawbreakers. In this case, smuggling and lawbreaking were forced upon them, but, having become used to them, they passed on to smuggling when there was no reason but increased profit.[5]

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[4] Winthrop Talbot, ed., *Americanization* (New York: H. W. Wilson Co., 1917), pp. 41-42.

The classic counterpart of this respectable colonial practice was the non-observance of the prohibition amendment in the twentieth century, when a legion of bootleggers, augmented by a greater legion of purchasers conniving at lawbreaking, successfully defied the strength of the Federal Government, even when aided by the additional authority of the states.

The westward movement of the American people was certainly accompanied by a generous measure of ''freewheeling'' observance of the law. When the royal officials marked a suitable tree in the backwoods of New England for a mast on the king's frigate, the pioneer did not hesitate to convert it into logs for a home. The taking of land without legal title gradually became sanctioned by society under the term ''squatter's right.'' And today there is the problem of automobile traffic regulations; the laws on the statute books are violated so often that the judgment of the individual really amounts to a common law of the highway, a state of affairs that some states have tacitly admitted by basing the speed limit on the general rule of reasonableness, that is, the judgment of the driver. Thus,

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[5] J. T. Adams, "Our Lawless Heritage," *Atlantic Monthly,* CXLII (1928), 735.

> The Westerners had their lands for which they did not pay. The Easterners carried their flag, when they did not raise the flags of other nations, into every sea. [And the twentieth century playboy carried his illegal liquor in automobiles faster than the rules allowed.] It was young, ruthless America, flouting the law he made.[6]

Lawlessness has not always been confined to the private citizen; officialdom has also been guilty of the practice. Occasionally a judge refuses to be bound by previous decisions of the court, perhaps influenced by some worthy reason; and he might be considered as making law rather than violating it, though such a privilege could degenerate into the worst kind of lawlessness, judicial tyranny. But most official lawlessness lies in the flexibility of interpretation of law when applied to specific cases. Administrative officials as well as judges have the legal privilege of construing it within reasonable limits, but the administrator can go farther than the judge; he can not only be lenient in the enforcement of the law, but can entirely ignore it, a practice that sometimes meets with public approval, especially when the law, applicable to "horse and buggy" days, is not suitable for the era of automobiles. Or, on the contrary, he can go to the extreme in enforcing law, even to the tyranny of the "third degree." And when obsolete statutes clutter the books, adding to the confusion in the citizens' minds about law, and making possible a greater amount of official and individual lawlessness, the matter becomes a subject for the cartoonist and the humorist.

Lawlessness sometimes takes on the proportion of group action; it arises from some deep-lying economic disturbance or a mixture of causes too complex to analyze easily, and constitutes a major threat to the peace and security of the community. Shay's Rebellion was a protest against falling prices and farm mortgage foreclosures, recurrent sources of complaint in American history. (These same reasons led a group of Iowa farmers to threaten the life of a judge a few years ago.) The Whiskey Rebellion, a protest against a direct tax on a basic product of frontier economy, called forth the armed strength of the new government to suppress it. And violation of the Fugitive Slave Law, an emotional, humanitarian reaction against an ancient system of human bondage, a total disregard of a legal concept of property, was a major factor in bringing on a civil war. Group action not only takes place against government, but also against private citizens; the lynching bee is a social phenomenon of long standing in America.

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[6] Wm. E. Dodd, "Our Ingrowing Habit of Lawlessness," *Century,* CXVI (1928), 692.

Thomas Jefferson wrote to Edward Carrington that

> if once the people become inattentive to the public affairs, you and I and Congress and Assemblies, judges and governors, shall all become wolves. It seems to be the law of our general nature, in spite of individual exceptions.

If the officials are so dependent upon the people for proper behavior, upon whom are the people dependent? But officials are people, therefore dependence in the last analysis rests upon the individual himself, upon his personal honesty, integrity, and a genuine interest in the social welfare. And to the extent that individuals are so constituted democracy can continue to be the foundation of our political system. The superstructure may be modified in keeping with the will and needs of the people, but it can never be shaken down.

INTERNATIONALISM

The problem of preserving democracy has not been dependent solely on the successful development of the country internally. Material expansion, political progress, and the growth of nationalism, were accompanied by the question of foreign policy. The immediate answer was defined in the word isolation; that is, freedom from European political entanglements. Isolation was not the idea of a given moment; its origin lay in the theory of a difference of interests between the Old and the New World, and in the practical experience of colonial participation in major European wars of the seventeenth and eighteenth centuries, wars that were known by different names in the two hemispheres, but that were part and parcel of one struggle. It is not surprising that when the British colonials were struggling for independence they visualized, in the event of success, that future wars across the sea should not have their repercussions in an independent America, that the theory of a division of interests should be realized in practice. Tom Paine announced this view clearly enough: "As Europe is our market for trade, we ought to form no partial connection with any part of it. It is the true interest of America to steer clear of European contentions."

Statesmen of the early national period accepted this theory of isolation as a cardinal principle of foreign policy, subject to modification only as expediency dictated. Temporary alliances might be necessary, and in fact were necessary to win the War for Independence, but the ideal was always kept in mind. A vision of isolation not only for the United States but for the continent was stated by Alexander Hamilton; and this wider view was affirmed by Thomas Jefferson when the prospects of a revolutionary South America were seen as the decadent Spanish Empire approached its demise.

The official policy of the government was formally announced in the classic farewell address of the first president. As the years passed, isolation was reaffirmed and strengthened as a guiding principle; it was defended by economic weapons, and eventually formulated in the Monroe Doctrine under the guiding hand of the experienced diplomat, John Quincy Adams.

> "You are afraid," said Richard Oswald to John Adams, "of being made the tool of the powers of Europe."
>
> "Indeed, I am," said Adams.
>
> "What powers?" inquired Oswald.
>
> "All of them," replied Adams; "it is obvious that all the powers of Europe will be continually manoeuvering with us to work us into their real or imaginary balances of power. . . . But I think that it ought to be our rule not to meddle."[7]

Even the humanitarianism of the nineteenth century, and our powerful feeling of sympathy for oppressed people the world over, could not shake the government from this tradition for many decades. The lyrics of Byron stimulated no material move toward assistance for the Greeks, although Monroe sympathized with them. The outbreak of revolutions in the mid-century and the arrival of the Hungarian patriot Kossuth produced no more than public demonstrations of sympathy, or speeches of welcome to the land of liberty where the torch of freedom burned brightly although Europe might fall into ruin. But the ability of Europe to survive destruction seemed to be greater than the ability of America to maintain political isolation. New ages beget new ideas.

The twentieth century was ushered in with the growing strength of another heritage of America, internationalism, the feeling of mutual interest, trust, and responsibility; a spirit of cooperative action by the capable for the benefit of all; an attitude that tends to minimize the nation and exalt the concept of unity of man. This twentieth century feeling is an echo from the past, from the eighteenth century when Tom Paine preached that "My country is the world, to do good, my religion." The echo was slow in bounding back because America was too engrossed with internal problems behind the rampart of political isolation to provide a good sounding board. Occasionally a voice was heard in approval; President Monroe toyed with the idea of sending aid to the

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[7] Quoted by John Bassett Moore, *The Principles of American Diplomacy* (New York: Harper and Brothers, 1918), p. 198.

Greeks, but realistic John Adams said no. And Monroe might have found some public support; at least one worthy citizen on the New York frontier was willing to furnish

> five hundred men, six feet high, with sinewy arms and case-hardened constitutions, bold spirits and daring adventurers, who would travel upon a bushel of corn and a gallon of whiskey per man from the extreme part of the world to Constantinople.[8]

But the people of our later age were presented with the international viewpoint in an emphatic way when a Spanish fleet was destroyed off the Cuban coast and Commodore Dewey sailed past the guns of Cavite to take Manila; they were faced with the question of whether or not to take possession of a colonial empire. When the answer was given in the affirmative, it was due to an admixture of motives, of idealism and materialism, of a vague feeling of responsibility for the welfare of less fortunate peoples and the lure of the dollar: in short, missionary and business motives were one. It involved the assumption of the so-called white man's burden, the advantages of extended commerce; the belief that America was taking its proper place among the major powers of the world; and the realization of destiny. The blessings of free institutions, along with the blessings of Christianity, were to be carried to backward peoples under the protection of law and order.

The annexation of Hawaii as a defense post was a logical step with the extension of our sphere of interest into the Far East, and the protectorate over Cuba broadened our viewpoint in the Caribbean area. In due time, President Theodore Roosevelt showed a sympathetic attitude toward the Panamanian rebels, and as a consequence the Canal Zone passed into our possession in 1904. Meanwhile Samoa in the South Seas had been acquired, and Wake, Midway, and Guam islands, stepping stones to the Orient for Pan-American Airways, became American possessions. The aggressive spirit generated in continental expansion did not disappear with the delimitation of national boundaries. The lure of the unknown in the misty Blue Ridge Mountains, the Great Plains, the intermountain plateau, regions of great distance and an atmosphere of spaciousness, generated a vision and speculative spirit that could bridge ocean barriers with ease. So, "Call it destiny, call it the will of God, call it the overruling result of circumstances, call it what you will,"[9] America committed itself to the program of modern imperialism and internationalism.

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[8] Quoted by S. E. Morison and H. S. Commager, *The Growth of the American Republic* (New York: Oxford University Press, 1938), I, p. 357.

The many threads of the American heritage are being woven into a definite pattern by the toil of successive generations, though the process is not yet completed. The older doctrine of isolation, the theory of a New World with a set of different interests from the Old World, has been successfully challenged and defeated in two major struggles by the newer doctrine of internationalism. For a quarter century the American has wavered between his love for the old and his interest in the new; whether to paddle his own canoe of state or work in union with other nationalities. Humanitarianism, love for the underdog, the hope of gain, pride in strength, have, in the past, influenced him to take part in the world drama, but the traditional fear of European entanglements has caused him to remain merely the prompter from the wings and let other nations play the part of the hero and the villain. Now the decision is made. He is in the play.

OTHER CONFLICTS

Again, the long tradition of individual liberty is in conflict with the demand for collective action in eliminating the inequalities of American life. This conflict of attitudes and desires appears in private discussion and publications, in political argument, in the struggle between employer and employee, and in governmental policy. For three-quarters of a century the government has reluctantly but surely encroached upon the freedom of individual action as the basis for the continued development and growth of America, but its policy has not yet been definitely established, for the people have not yet spoken with clear and distinct instructions. Policy wavers between appeals to the supposed inherent goodness in man, to his sense of fair play and justice, to ''rugged individualism,'' and the passage of stringent laws and stricter law enforcement to promote collective action; it alternates between regulatory codes for business and the enforcement of the Sherman Anti-Trust Law to maintain competition as the mainspring of the economic system. The American heritage of freedom of individual action is a powerful tradition and will not yield readily to the modern trend toward a collective society.

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[9] Charles Denby, "Why the Treaty Should Be Ratified," *Forum,* XXVI (February, 1899), 643.

The American nation has been developed despite the existence of a few discordant elements. Americans are bound together by a common language, laws, and historical traditions, but not by a common culture. That is slowly evolving. Democracy, that great ideal of government by the people, is the distinctive part of the heritage, and, it is reasonable to believe, a permanent part. In general, the American of today does not possess a pure, or unmixed heritage, but he has a great heritage, the product of toil, struggle, and the experience of three centuries in the New World environment.

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VIII. THE DEVELOPMENT OF THE AMERICAN EDUCATIONAL SYSTEM

THE American educational system—if a process of development that had no definite point of beginning and, for a long time, no well-defined end can be called a system—has its roots deep in the European traditions. Yet out of its sprawling and often undirected growth has evolved a type of organization that, at least until recently, finds no parallel among the countries that gave it its initial stimulus. Because of its slow and devious growth, guided little if at all by any centralized authority, the development of the American educational system is difficult to trace with the clarity that such a potent force in our national life deserves.

Education in America, in the formal sense, began with the period of colonization. With no American culture and few traditions to draw from, it is only natural that the early schools reflected the European backgrounds of their founders. Organized attempts at education may be said to have begun in 1616 when King James I ordered the Bishop of London to collect funds for a college to be founded in Virginia. Intended to give only a rudimentary education to the children of the Indians of the new land and some hundred waifs who were gathered together in London and shipped to the Virginia colony, the new institution was far from a college in the modern sense of the term. More children were later sent to the struggling colonists, who were for the most part themselves unmarried or had left their own children behind in England, but the massacre of 1622 put an end to the college perhaps even before it had begun to function.

Other early attempts were made to found schools in the Virginia Colony, the greater number of them through private bequests. Of their accomplishments there is little recorded, as is likewise true of the scattered efforts to establish schools for orphan children. The one outstanding permanent educational achievement of the Virginia Colony was the securing of the charter for the College of William and Mary in 1691.

THE REAL BEGINNINGS

For the real beginning of any lasting effort toward education in America it is necessary to move farther north along the Atlantic coastline to the Dutch settlement at New Amsterdam, where the first school of which there is definite record was established in 1633. This school, whose direct descendant is still in operation, was established by the Dutch colonists for the education of their own children and offered instruction of a strictly elementary character. Thus was popular education in America begun, although it was not until some years later that the pattern was followed by other colonies. This rudimentary type of education must have satisfied the frugal Dutch settlers for some time, as the first Latin grammar school was not opened in the New Netherlands until 1659.

The efforts of the New England colonists present a more complicated as well as a more important phase of the early history of our American educational system. Coming as they did, not as adventurers or as impoverished immigrants, but as settlers who had no thought of returning to their native shores, these men and women first founded homes, then churches, and then schools, these great social institutions appearing almost concurrently. Although the European influence was plainly evident in the pauper schools of the South and in the apprenticeship training of the pauper children which flourished in all the colonies, it was most apparent in the three types of schools that arose early in the New England colonies—the Latin grammar schools, the writing schools, and the dame schools.

As might be expected in a colony founded because of the motives that actuated the people of Massachusetts Bay, schools were first established in order to perpetuate an educated clergy and the instruction given was designed to foster such an end. Admission to the Latin grammar school, forerunner of the modern high school, presupposed preliminary training in English. Its graduates became candidates for college entrance. Writing schools were also for young boys who had previously learned to read, but the instruction was confined to writing and arithmetic. Reading and spelling were taught in the dame or petty school, an institution conducted in her own home by some woman of the neighborhood. Not proceeding so logically as their Dutch neighbors, who began to build their schools from the bottom, the New Englanders established the Latin grammar school as the first of these institutions.

Modeled closely after the typical European secondary schools of that period, the Boys' Latin School was opened in Boston in 1635, antedating the founding of Harvard College by one year. This Boston institution, where the famous Ezekiel Cheever was headmaster for over a third of a century, was the first of many similar schools established in New England, albeit they were never popular schools for the education of the masses and were subsequently supplanted by the academy. It should be noted, however, that progress in education did not run evenly in all of the New England colonies. In the Plymouth Colony, for instance, the development on any extensive front was somewhat slow even as late as 1650; in Connecticut, education seems to have been an early concern of the settlers; while in Rhode Island, because of the feeling that public education savored of coercion, the followers of Roger Williams waited almost two hundred years to enact any school legislation, although education, almost wholly as a private enterprise, was carried on even in the early years of the colony.

To obtain the clearest picture of the development of early colonial education, it is necessary to turn again to the Massachusetts Bay Colony. Whereas the dame schools and writing schools, which flourished throughout the entire colonial period, and even the Boston Latin School were variously supported through private subscriptions, rate bills, and rents accruing, a school was established in 1639 in Dorchester which was supported through the direct taxation of the inhabitants of the town. So great, in fact, was the interest of these early settlers in training their children ''in learning and labor and other employments which may be profitable to the commonwealth'' that it is not surprising to find the colonial legislature, in the justly famous Massachusetts School Ordinance of 1642, enjoining the selectmen of the town ''to take account from time to time of all parents and masters, and of their children, concerning their calling and employment of their children, especially of their ability to read and understand the principles of religion and the capital laws of the country.'' Although this law did not require the actual establishment of schools (such education as was given being left to the parents), and did not demand attendance on the part of the children, it may fairly be said that in it was established for the first time, not only in America but perhaps in the entire English-speaking world, the principle of compulsory education.

The law must have been ineffective, however, probably because of the actual inability of many of the parents to instruct their children, for it was quickly followed in 1647 by another enactment dealing with education. This ordinance, a document that has often been referred to as the most important school law in the educational history of America, ordered each town of fifty householders to appoint one of their number to give instruction in reading and writing to such children as might come, and each town of one hundred householders to maintain a grammar school to prepare the youth for the university, under penalty of a fine of five pounds for their neglect for every year in excess of the first, such money to go into the school fund. Again the law was silent upon the matters of compulsory school attendance (which was not to appear until 1852) and standards for the school offering, but it did serve to establish clearly the principles of state responsibility for education and support by public taxation. Although the paltry fine was not sufficient to enforce compliance on the part of all the towns coming within its provisions, many schools were started and by the close of the century at least half a dozen schools which were essentially secondary had been established.

Thus, approximately a century after the founding of the early colonies in America, educational attitudes had manifested themselves in three rather distinct forms. In New England the conception of a system of schools supported by the state, religious as well as civic in purpose and encompassing the common grades through the Latin grammar school to the college, was generally accepted, a conception which, with the later separation of church and state, was to provide a well defined pattern for our modern school system. In the Middle colonies the schools were mainly parochial, although Pennsylvania with its mixed Protestant sects reflected a tolerance of all educational plans. Here parochial schools taught by the ministers predominated, but in the larger towns private schools supported by private tuition were not uncommon. Perhaps because of the emphasis upon religion and the fundamental subjects rather than upon higher instruction, girls were admitted to most of these schools. In the Southern colonies the original system of charity schools for the orphans and the children of the poor persisted, while the children of the middle and the upper classes were sent to private or church schools. Noteworthy, however, is the progress made in this section in higher education. In the words of Cubberley, "The seventeenth century was essentially a period of transplanting, during which little or no attempt at adaptation or change was made."[1]

THE TRANSITIONAL PERIOD

The period immediately preceding the Revolutionary War was one of expansion inland, especially so far as the New England colonies were concerned, and with it came an inevitable effect upon the schools. Down to this time education had been encouraged primarily from a religious motive. With the abolishing of the edict requiring all citizens to live within one-half mile of the meeting house, some of the pioneers tended to gather in inland communities more or less distinctly set off by natural barriers. Support of the schools by the church became increasingly a burden, and there was soon a demand that the town make the central school free and finance it by district taxation.

As the central school was of little service to those who had pushed inland, however, there next arose a request that education be made available to all the children by the simple expedient of holding the school for a time in one community and then moving it to the next. Short terms and lapsed interest on the part of the pupils soon prompted a demand that each community be permitted to retain the taxes collected therein for the support of its own district school. Thus early were planted the seeds of a condition that has lived to plague our schools down to the present time—the paradoxical situation of rendering lip service to the conviction that education is a function of the state while maintaining the small district as the unit of administration and financial support. Although not without its good points in generating a feeling of local interest and initiative, it has stood in the way of much progress toward consolidation and an equalization of educational opportunity.

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[1] See Reading List, Cubberley, p. 37.

With the inland movement there came an increased interest in the trades and agricultural pursuits. Here again the responsiveness of the schools to social trends is evident. Private secondary schools sank to a minority status and the academy as an instrument for a more practical and less aristocratic type of education began to take the place of the Latin grammar school. Harvard and Yale discontinued their former practice of listing students by class and rank of their parents. Elementary instruction, however, even near the end of the colonial period, was left almost wholly to private enterprise or to religious direction. The dame school was still the accepted medium of primary education.

The development of a distinctly American type of educational system was checked, if not altogether halted, by the Revolutionary War. The practical demands of the moment left little opportunity for plans for the future. A national debt so enormous that many feared it could never be paid drew the public purse strings tighter. Many parochial schools and most of the rural schools were forced to close because of financial difficulties. With the minds of the early patriots upon their more immediate needs and the preservation of their newly won liberties, it is small wonder that neither the Articles of Confederation nor the Constitution made reference to education. Responsibility for education is among those implied powers reserved to the several states under the terms of the Tenth Amendment. The Constitution did, however, ban a state religion, and this action, with the right previously granted each district shortly after the Revolutionary War to elect the school trustees, levy school district taxes, and select the teacher, rather definitely separated church and state in matters of education. For a time the right to certificate the grammar school master was left to the local ministers, but soon they were to have only the privilege of accompanying the selectmen on their school visitations. Even the textbooks reflected the decreasing emphasis upon religion as the prime purpose for which the schools stood. Thus another stone was laid in the foundation of our modern school system.

Public education in America was given further impetus by the action of the state legislatures in abolishing property qualifications for voting and the granting of general manhood suffrage, accomplishments which were common to most of the states by 1830. The resulting increase of interest in politics supplied a new purpose for education and did much to supplant the former religious motive. The period of territorial expansion and westward migration which marked the first half of the nineteenth century, while serving to fix the New England structure of school organization and support upon much of the new country, also gave a more utilitarian aspect to the educational offering. The growing demand for less academic and more practical instruction was further accelerated by the large influx of new settlers from Europe.

Even the infant Federal Government gave its tangible endorsement to the system that was taking shape by beginning, upon the admission of Ohio in 1802, the practice of giving the sixteenth section of each congressional township to each newly created state for the support of public schools. Each new state except Texas, in which there was no national domain, eagerly availed itself of the grant, and the older states were encouraged thereby to set up school funds of their own. The benevolent attitude of the National Government toward education was increased upon the admission of California in 1850 and the grant was extended to include the thirty-sixth section. When Utah, Arizona, and New Mexico were admitted the bequest covered four sections of each township. The possibility that the newer states would perpetuate the charity and the parochial schools of the older states was thus almost completely eliminated.

The progress of public education did not move smoothly on all fronts, however, nor was there uniformity in its development in the various sections of the nation. After the formation of the union most of the original states rewrote their constitutions or formed new ones. The majority of them failed to mention the subject of education. Massachusetts and New Hampshire were noteworthy exceptions. Thus there arose what Cubberley has termed the good-school-conditions group, the pauper-parochial-school group, and the no-action group. Fortunately for public education it was Massachusetts, of the first category, which was most influential in the settlement of the states carved from the Northwest Territory and the educational pattern of New England dominated that area. In the Middle States the pauper-parochial-school group vied with the more liberal ideals of the North, while in the Southern States, largely the no-action group, the system of sectarian and charity schools was rather firmly implanted.

NINETEENTH CENTURY MOVEMENTS

Another potent educational force in the life of the young republic was the academy movement. Originating in the latter part of the eighteenth century as purely private institutions, the academies apparently caught the public fancy to such a degree that many state legislatures assisted the struggling institutions with generous grants, so that they became virtually semi-public organizations. The interest of the citizenry in this newest of school enterprises, although somewhat deflected by the struggle to hold the nation together through its first perilous years and the renewed difficulties with England which culminated in the War of 1812, continued past the middle of the nineteenth century. The simple, even frugal, life of the people, together with their immediate concerns with agriculture, seems to have emphasized their regard for a more practical type of education. The academies soon lost much of their former resemblance to the old Latin grammar schools and new subjects of study better adapted to present needs were introduced. Girls were admitted to many of the academies.

Although elementary teachers were often trained in the academies, elementary education, in the sense of schools for the people, was curiously enough not a matter of great public interest. In fact, public enterprise seems to have been much more concerned with the establishment of state universities and colleges, a movement that was encouraged by the grants of land for their support to many of the newer states. As a result, the growing policy of a state-supported educational system was strengthened still more.

The charity school idea, however, was by no means dead at the early part of the nineteenth century, even in New England. There had originated in England an organization known as the Sunday School Society for the purpose of providing a rudimentary training to children who were employed in factories on week days. It was really secular, although instruction was given in reading and church catechism. When the idea was introduced in America such schools were at first publicly supported and the original purpose was adhered to, but it was not long until the instruction was opened to all children, particularly the poor. The plan was soon taken over by the churches, however, and the elementary training of the poor children was financed through subscription societies. Besides arousing greater interest in popular education, the work of these societies served an immediate need. The New York Free School alone educated over 600,000 children and trained over 1200 teachers by 1853. As the schools of the subscription societies existed primarily in the larger cities, it was only natural that in many cases these schools were absorbed by the public school departments after their worth and popularity were evident. When they were not actually taken over by the public schools they were usually aided by appropriations of public funds.

Another entering wedge for tax-supported schools was driven by the introduction of the Lancastrian monitorial system to America, a scheme whereby one instructor taught selected pupils who, in turn, taught the other pupils. One instructor could thus handle as many as five hundred or a thousand pupils in a large room. For a while during the early part of the nineteenth century these schools were very popular, their inexpensiveness of operation making elementary education on a large scale possible for the first time in many communities. Many of the first free schools to be established were of the Lancastrian type.

Further impetus to the concept of elementary education as a public function was given by the establishment of infant schools. This movement, brought over from Scotland, came at a time when the popularity of the Lancastrian schools was beginning to wane. The infant schools, largely influenced by the plea of Pestalozzi for more attention to the psychological conceptions of instruction, did much to supplant the dame schools and the home in the education of young children. No small service to the cause of education was rendered by the infant schools in focusing attention upon the need for increased training for teachers and in opening the teaching field in larger measure to women. It was some time, however, before the special province of the infant schools was to be accepted as an integral part of the grammar schools and even today in some parts of the nation instruction at the lower primary level is not yet recognized as an obligation of the public school system.

Except in the South, which was little affected until after the Civil War, social and economic conditions began to change about 1825. More large towns and villages were springing up. An era of manufacturing, commerce, and invention was ushered in. "The church, charity, and private school system completely broke down under the strain"[2] of amalgamating a heterogeneous population. The need for child labor on the farms was diminishing and the incidence of juvenile crimes in the cities was increasing. These factors, together with the extension of manhood suffrage and the breakdown of class distinctions which was heightened by the election of Jackson in 1828, served to quicken a recognition of the desirability of general education. It was not without a hard-fought battle, however, that the principle of tax-supported free schools was established, a battle which was waged against vested rights by the newly organized school societies and educational associations, ably seconded by the workingmen. Permissive school taxes in some cities, the decline of income from fees, grants, licenses, and lotteries, and the offer of state aid to encourage local taxation for schools all served to hasten the demise of the pauper schools and generally to end the rate bills for school support.

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[2] *Ibid.*, p. 107.

The evolution of our schools down to the middle of the nineteenth century had been almost entirely local, from the community upward and not from the state downward. Although scattered evidences of a new tendency were apparent before 1850, it was not before this date that states generally began to assume supervisory control over public education. Little by little the trend began to assert itself. In return for state aid, local districts gave up a part of their authority. Reports, both attendance and financial, were required by many states, and state laws relating to the curriculum, teacher certification, and other pertinent school matters were soon forthcoming. Finney[3] refers to the period from 1835 to 1861 as "the great educational awakening."

The struggle for state supremacy was not an easy one, nor has anything but the most general state supervision been everywhere accomplished. Early in the century a few states had appointed or elected a chief state school officer, usually called the State Superintendent of Public Instruction, but not all of them were so fortunate as to have the aggressive and enlightened leadership that Horace Mann gave to Massachusetts or Henry Barnard to Connecticut and Rhode Island. During this period, too, the fight for secular schools was continued, culminating in victory only when most of the states had revised their existing constitutions or written new ones to prohibit the diversion of state funds to private and sectarian educational institutions.

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[3] Ross L. Finney, *The American Public School* (New York: Macmillan Company, 1921), pp. 109-145.

Another of the highly important developments of the nineteenth century was the rise and expansion of the free public high school. Although the first American high school was established at Boston in 1821, the spread of the movement in its early period was slow. The academies had apparently fallen into step with the times and were revising their offerings toward less rigid and more practical courses, even though they still existed, for the most part, as semi-private institutions. Religion, but not sectarianism, was taught. Even so, in spite of the transition which the academies had undergone, the high school at Boston represented a radical departure from the accepted nature of secondary education. No language but English was offered, and all the courses were practical in nature and purely American in purpose. The popularity of the academy, however, did not decline until late in the century.

The development of the new institution was greatly furthered by the Massachusetts Law of 1827, which required the establishment of a free public high school in every town having 500 families or over, and by the amendment of 1835 extending the privilege to any smaller town. In most of the states the legislation relating to high schools, if any at all existed, was permissive rather than mandatory. As a consequence the early establishment of the public secondary schools was confined principally to Massachusetts and New York. Other Eastern states gradually followed these examples, and in most of the Western states high schools were opened soon after cities were established. In many instances, however, outside of New England and New York, the spread of the movement was arrested by court contests. Not until after the decision in the famous Kalamazoo Case of 1872 established the legality of taxation for secondary education did the increase in the number of high schools continue without interruption. Only slightly more than three hundred public high schools existed in 1860.

Meanwhile the college movement, which was well established even in the colonial times, continued to grow. At first distinctly denominational in character, the colleges were, down to 1870, still largely private institutions. Another famous court decision, the Dartmouth College Case of 1819, lent impetus to the college movement, both public and private, by establishing the right of private colleges to exist as such, safe from seizure by the state. When, in 1787, the Federal Government granted to the Ohio Company two entire townships for the establishment and support of a university, a policy was begun which was continued with the admission of each new state. This grant did much to encourage the founding of state universities, especially in the South and the West. Many of the states, particularly the newer ones, made provision in their constitutions for a state institution of higher learning. The earlier colleges of all types, however, were largely struggling institutions of small enrollments, meagerly staffed, and with insufficient equipment. Few of them were coeducational until after the Civil War, when higher education for women became more popular. Not until 1875 may the period of expansion of the state universities and colleges be said to have been reached.

The granting of 30,000 acres of public land to each state for each senator and representative in Congress, as provided by the terms of the Morrill Act of 1862 for the creation of state colleges of agriculture and mechanic arts, was perhaps the final achievement in the struggle toward a system of free public education in the United States which offered instruction on the elementary, secondary, and higher levels. The machinery was now provided and there remained only the refinement of the plan for the fuller accomplishment of its purpose.

As implied above, the latter part of the nineteenth century was largely devoted to the improvement of the system which had been so laboriously built up. New subjects were added to give more practical direction to the offering and new textbooks further changed the character of the instruction. Although the teachers, with a few marked exceptions, were poorly trained, institutes and normal schools sprang up to remedy this defect, albeit the teachers themselves at first objected to their presence on the ground that they were reflections upon the ability of the teachers then employed. Much improvement was made in the system of pupil classification. Teaching equipment and housing facilities, however, continued to be poor. In fact, many of the school buildings of this period stand today as mute evidence of the distance the American public schools have come in the past fifty years.

THE TWENTIETH CENTURY

American education in the twentieth century[4] has been chiefly characterized by modifications of the structural organization, a very marked increase in secondary school enrollment, and internal changes in the curriculum. The development of the junior high school is an excellent example of the first characteristic. Essentially a product of the present century, although the suggestion of a revised and departmentalized upper elementary grade organization had been made by President Eliot in the eighties, the junior high school has proved so popular that now fully 40 per cent of the secondary schools of the United States are of the reorganized type. In its inception this new rung of the educational ladder was intended as a device for hastening the entrance of pupils into college work, but the original purpose was soon lost. Three major claims are usually made for the junior high school organization: it cushions the transition from grades to high school, promotes retention of the pupils, and affords greater opportunity for the recognition of individual differences. In many communities, of course, the reorganized school is but a change in outward form only, prompted by a desire to follow the leader. There is even good reason for thinking that in some instances the move has yielded little gain in educational returns but, on the contrary, has served to increase school expenditures.

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[4] For an extended treatment of this topic, see: Stuart G. Noble, *A History of American Education* (New York: Farrar and Rinehart, 1938), pp. 330-51.

In support of the first point it is contended that the introduction of departmentalized instruction at an earlier period in the child's educational experience tends to remove some of the awe with which he views the highly departmentalized work above the eighth grade and not only encourages him to persist in his school work but also makes for better adjustment to the new methods, new subjects, and new environment of the higher level. Recently, however, there has been less emphasis placed on departmentalization than in former years. This change is probably due to the realization that teachers of departmentalized subjects are prone to teach subject matter as they have been accustomed to teach it in the conventional high school rather than to adapt their teaching methods to the demands of the junior high school group.

Closely connected with the first point is the second claim. Under the conventional 8-4 organization the completion of the eighth grade was achieved at about the same time the compulsory attendance laws of most states released the child from the obligation of further attendance. By lowering the break by two years it was hoped that many students would be forced by law to enter the junior high school division and that, once having tasted of its offerings, they would be more likely to remain to complete the ninth year. It should be mentioned, however, that in remedying one defect of the old plan another break was created which affords a convenient stopping place before the completion of the twelfth grade.

Of more significance at the present day is the third claim put forth by advocates of the reorganized school. The introduction of departmentalized work has made possible the application of the elective system to the grades of the junior high school. The lessening of the insistence of college entrance boards upon a highly academic program at the secondary level has given opportunity for a wider vocational offering of which the junior high schools have been quick to avail themselves. Broadening and finding courses, try-out and short-unit courses, exploratory and general courses are common terms in the vocabulary of the modern junior high school. A separate division of the educational organization, it is also urged, is more likely to insure specific attention to the needs of pupils in the early period of adolescence. As pointed out above, however, the reorganized school demands a reorganization in spirit as well as in outward form if its fullest values are to be realized.

Although the most usual division of the public school system, other than the 8-4 plan, is the 6-6, with the 6-3-3 organization highly popular in the larger cities, many other groupings of elementary and secondary grades are found and the future may bring other combinations. In fact, there is a growing tendency to regard the first two years of college as within the secondary realm, especially where junior colleges have been set up as an extension of the public school system. Whether locally supported or existing as state or private institutions, many of these organizations, like the other secondary divisions, now stress courses which are definitely terminal in nature.

Other structural modifications of the earlier framework of public school organization are seen in the downward extensions of the elementary school to embrace not only the kindergarten but the nursery school as well, in the part-time and continuation schools, and adult education. The assistance of the Federal Government, especially that dating from the passage of the Smith-Hughes Act in 1927 and extending to the recent legislation which has made C.C.C., N.Y.A., and W.P.A. familiar terms, has done much to bring about a broadening and an extension of educational opportunities.

The phenomenal increase in secondary school enrollment and the attendant problems it has created are well summarized in a recent statement by President Conant of Harvard:

> Let us consider the striking contrast between 1898 and 1938. At the turn of the century, universal elementary school education was well established in the United States. Secondary education, however, was still limited to a very few. The pupils attending a public high school, or a private school of similar character, constituted only about ten per cent of the boys and girls between the ages of fourteen and seventeen. This figure increased steadily with each succeeding year of the twentieth century, but it was only after the war that the revolutionary magnitude of the change became apparent. The proportion of the population of secondary school age attending school mounted from thirty to sixty-five per cent between 1920 and 1938. In terms of the total number of young people the increase from 1900 to 1936 was from 630,000 to 6,300,000. But, more significant still, during this same period the primary function of the high school changed its character. Instead of being concerned largely with boys and girls whose interests and abilities were such as to give them high aptitude for ''book learning,'' the schools now include every kind and level of ability; the student body comprises youths with the widest possible range of ambitions. The schools must accommodate pupils the majority of whom would not profit from the type of education which was standard two generations ago.[5]

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[5] James B. Conant, *Report of the President of Harvard University to the Board of Overseers, 1937-38* (Cambridge, Massachusetts: Harvard University Press, 1939), pp. 4-5. Reprinted by permission of the President and Fellows of Harvard College.

Whether the enrollment in our secondary schools has reached its peak point is a matter of some debate. A falling off in the elementary school enrollment, due probably to a declining birth rate and restricted immigration, has already manifested itself, and many predict that the effects will soon be felt in the high schools.

As implied in President Conant's statement, possibly the most important development that recent years have brought, although one less evident to the lay observer, is the change in the content and emphasis of the curriculum. Educational reformers had, of course, been active in the preceding centuries, but the past forty years have seen the most successful assaults upon the doctrine of formal discipline so long held by the conservative group who made the curriculum one dominated by emphasis on subject matter. Foremost in the campaign for greater stress on life needs and less on formal and traditional requirements has been John Dewey. Although it cannot be said that the battle between the conservatives and progressives has given total victory to either camp, it cannot be denied that there is now a decided tendency to express educational values in terms of utility. Vocational education has definitely been incorporated into the public school system, and elective subjects are now a recognized characteristic of the secondary and higher schools.

The inclusion of certain vocational subjects in the high school offering, particularly clerical studies, manual arts, and home economics, was common practice in many instances in the last quarter of the nineteenth century and had even been evident to a degree in the schools of the academy period. To translate the curriculum into life activities, however, radical changes have taken place not only in the attitude toward the importance of the more practical phases of the offering and in the introduction of many additional vocational courses but also in the methods of presenting the subject matter. Whereas the organization of the curriculum had long been on the basis of separate subjects, the twentieth century has seen considerable experimentation with core curricula centered around a subject field, most often the social studies, and with fused or integrated curricula which cut across the old subject-matter barriers.

The activities of the Progressive Education Association have done much to accelerate the transition from the formalized education of a generation ago to the broad, practical offering of the modern high school. Some schools, of course, have gone much farther along the road than others, but there are already many institutions which have extended the campus to embrace the entire community. It is not unusual to find instances of co-operative working arrangements with industry or to see present-day students actively concerned with the practical problems of the home, the neighborhood, or the municipality. When one realizes that but half of the seven million students now enrolled in American high schools will graduate and that of these only one out of three will enter college, the wisdom of such provisions can scarcely be questioned.

The present century has also witnessed a decided change in the attitude of the schools toward extra-curricular activities or, as some writers would prefer, school life activities. At first ignored, then openly opposed, such activities are now welcomed as devices to further the aims of modern education and to supplement the present elective system. Some authorities have even predicted that extra-curricular activities may in time come to bear the same relationship to the curricular offering as laboratories now bear to the science courses.

Vocational guidance was born scarcely more than thirty years ago. As the elective system has developed and the vocational emphasis in secondary and higher education has expanded, the aims of guidance have developed apace. Originally conceived as an attempt to fit the student to the job, it now reflects the fourfold purpose of assisting the pupil to choose, prepare for, enter upon, and progress in his intended vocation. Many would go further and extend its purpose to include social, moral, leadership, and leisure-time guidance, making it virtually an integral part of the entire educational effort.

Important, too, in the recent history of education in America have been the mounting cost of public education, the increased standards for teacher certification, the improvement of the school plant, the general raising and better enforcement of compulsory attendance requirements, and the increasingly larger participation of the state in the financial support of education. Private education, meanwhile, has existed side by side with our public schools. Largely denominational, except for the distinctly vocational schools and some of the higher institutions, it, too, has reflected the operation of the same influences that have marked the development of the tax-supported schools. Although in mere numbers the enrollment in private institutions of all levels has grown throughout the century thus far, figures show a gain in the percentage of the population enrolled in the public schools and a loss for the private schools. It may now fairly be said that we have reached the point where the majority of our people endorse the principle of a system of free, tax-supported schools extending from the kindergarten at the one extreme to the graduate school at the other.

This, then, is the story briefly told of the evolution of our tripartite system of schools in America. It is outside the scope of this chapter to interpret or to philosophize. Little attempt has been made at evaluation. Let it suffice to hazard the guess that only the external structure has been fairly rigidly established and that as the years go by constant internal adjustment will be made to changing conditions as they have been made in the past, to the end that our public schools may continue to deserve the support and merit the faith of the American people.

Reading List

Burton, William H. *Introduction to Education* (New York: Appleton-Century, 1934), Chapters VI-XI.

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Graves, Frank Pierrepont. *A Student's History of Education* (New York: Macmillan, 1936), Chapters X-XIII, XV, XVII, XX.

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IX. RECENT AMERICAN EDUCATORS

HAD an educational prophet of the early nineteenth century been able to look forward with assurance to the accomplishments that had become realities near the close of the century, he doubtless would have been satisfied. The American public schools of 1890 made available a system of tax-supported education from the elementary through the collegiate levels to a reasonable number of the citizenry. The quality of the teaching personnel had been improved. The length of the school term had been extended. The offering had been broadened and liberalized. But gradually it became apparent that attainment of a near-ideal was not producing an educational product which functioned well in the social order that increased industrialization and heightened immigration had developed. The aim of education had not kept pace with social change. The traditional school, with its emphasis on learning for learning's sake—a cold, difficult, highly formalized learning at that—was failing to cope with the life-needs of a new society. Social advance had passed the schools by.

These industrial and social changes did not, of course, come abruptly, nor had their coming been altogether unnoticed by the school men of the day. For a century or more, suggestions for improved or different teaching methods had been voiced and in isolated instances had been heeded, but it remained for those educational leaders who ushered in the twentieth century to bring a new philosophy and a new psychology to the American school system.

Across the stage of American education since 1890 have passed many men and not a few women who have helped to formulate and to popularize the new philosophy. Some of these pioneers are still active in the work. Others have made their contribution by offering constructive criticism of the progress of their contemporaries. It is the purpose of this chapter to present a selected few who have been leaders in the educational development of the past fifty years. But let the reader remember that this list is representative rather than inclusive. Many others not here mentioned are as fully deserving of credit. Nor should these brief statements be mistaken for expositions of the philosophies of the men concerned. Real and complete appreciation of the theories held by these educational statesmen can be gained only by wide reading of their many books and articles. It is hoped, however, that this presentation may be an aid to some understanding of the forces that have led education away from the formalism of the earlier nineteenth century toward the freer, more active education of the present.

FRANCIS WAYLAND PARKER (1837-1902)

Colonel Parker, who gained his military title through his service with the Federal Army during the Civil War, represents in one man the synthesis of many educational theories and philosophies which had been stirring in the educational world during the latter part of the nineteenth century, and to understand his contributions one must understand the tenets of some of the more noteworthy of the European philosophers. Pestalozzi would follow ''the course laid down by nature,'' reducing every sense perception to its elements and applying to his teaching those principles gained from a sympathetic insight into the minds of children. Only by an appeal to the child's previous body of related knowledge, he held, could the teacher gain and hold the interest of the pupil in a new idea. Herbart would correlate and concentrate. Ritter would stress naturalism and concrete observational work, especially in the field of science. Froebel would depend upon motor expression, freedom, and social development.

Parker studied for several years in Germany and worked with Guyot, a pupil of Ritter. He served as a district school teacher and school principal. In a normal school in Ohio he tried out and observed new methods. His work as superintendent of schools at Quincy, Massachusetts, where he introduced flexible gradation and irregular promotions and made a beginning at supervised study for the less capable students, gained for him the fathership of the so-called Quincy Movement. When, five years later, he assumed the position of Assistant Superintendent of Schools at Boston, he left at Quincy a curriculum wherein skills were taught in connection with other subjects and which placed less emphasis upon formal memorization of the textbooks and more upon a study of life situations.

Parker left Boston in 1883 to accept the principalship of the Cook County Normal School in Chicago. Into the preparation of teachers and the development of teaching methods, for which he is best known, Parker wove the best from the philosophers and scientists of his time and supplemented it with his own rich experience. During his tenure for the next eighteen years the Cook County Normal was, as one writer puts it, ''the great storm center of educational reform.'' In 1899, with little interruption of his work, he assumed the directorship of the newly organized School of Education of the University of Chicago, now the Department of Education of that institution. Here, as a colleague of John Dewey, he continued until his death in 1902.

Parker's immersion in the practical problems of school organization and teacher training left him little time for writing but afforded ample opportunity for lecturing. His Chicago Normal School became a mecca for teachers seeking the latest word on teaching procedures and he rapidly became known as one of the greatest authorities in the field of educational methodology. His collaboration in the organization of the famed Laboratory School, forcing bed of the later progressive education movement, and his wide influence on the teachers of his time paved the way for the work of Dewey and his associates. Chief among his writings are *Talks on Teaching* and *How to Study Geography.*

Although he could scarcely be called a Herbartian, Parker did approach concentration by centering his entire course of study mainly around the natural and social sciences. His guiding principle in the reorganization of the elementary program was always an attempt to fit education to the needs of the child. He constantly stressed the fact that the child, not subject matter or subject, was the true center of the curriculum, and his one great purpose was the development of effective citizenship and community life. His acceptance of the conventional subject curriculum did not deter him in his emphasis upon the importance of child growth. With Harris, he was a pioneer in introducing novel teaching methods and administrative organizations. Especially interested in the teaching of geography, he took his children out of doors that they might apply concrete observation to the study of this subject. From his schools thousands of well prepared teachers carried his methods and his ideas to all parts of the nation.

WILLIAM T. HARRIS (1835-1909)

If William T. Harris had not chosen to devote himself actively to the practical task of school administration, the world would probably have remembered him as an American philosopher. As it is, he earned for himself the title of America's first great educational philosopher and justly deserved the tribute of a recent writer: "For more than thirty-five years he was universally recognized both here and in Europe as the most distinguished philosopher and educator in America."[1] When he entered the service of the St. Louis schools in 1857 he came under the influence of the German philosophers Kant and Hegel. Kant it was who believed that the education of the child must bring out his inherent potentialities and that the pupil was always to be treated as an end in himself. Hegel, as Brubacher sums him up, held that ". . . education projects itself or objectifies the self into the world of thought, the social heritage, and brings it back enriched in knowledge."[2] Upon his promotion to the superintendency of the St. Louis system in 1867, a position which he held until 1880, he put these theories to practical application and rapidly brought his school to a level of universally recognized leadership.

Co-operating with Susan Blow, Superintendent Harris opened in 1873 the first public school kindergarten, transferring to a strictly educational status an institution which had previously existed as a private or an experimental undertaking. His scientific studies of the principles underlying kindergarten training were widely expounded, to the lasting benefit of education throughout the nation. Here, as well as in other levels of the system, Harris exhibited his dislike for the formalism of Pestalozzi. This attitude was best exemplified in his substitution of natural science, probably influenced by Spencer, for the precise object lessons of Pestalozzi. Although his presentation was technical, it was a break with the arguments for formal discipline in that he advocated natural science for its social and practical values. Later his natural science was replaced by nature study, with lessened stress on scientific classification and better regard for its psychological organization in accord with the learners' interests.

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[1] John W. Withers, "Tribute to William Torrey Harris," *School and Society,* XLIII (March 14, 1936), 356.

[2] John S. Brubacher, *Modern Philosophies of Education* (New York: McGraw-Hill, 1939), p. 33.

Further evidence of Superintendent Harris' thinking in the realm of elementary education is seen in his steps against the rigid grading system and inflexible promotions.[3] The elementary schools had become graded about the middle of the nineteenth century. Soon the lock-step scheme of advancement from grade to grade was saddled firmly upon the schools and by 1870 was common practice. In many of his early reports to his board of education he pointed out the tendency for the extremes of a given class to separate progressively. The essence of his proposed remedy called for a frequent sifting of pupils according to their progress, with the formation of new class groupings at intervals of six to twenty weeks. Although his plan was too complicated for easy duplication in other systems, especially smaller ones, the agitation against the rigid organization of grades and subject matter which he carried on for forty years through his speeches and publications did bear fruit in the early double and multiple-track plans such as those of Cambridge, in the differentiated-curricula plan of Santa Barbara, and in the current plans for ability grouping. To Harris clearly belongs the credit for making one of the earliest attacks upon the administrative problem of breaking up what he called the "Procrustean bed of grades."

Harris' educational interests were by no means confined to the elementary level. He served as a member of the famous Committee of Ten which, in 1893, sounded the call for release of the secondary schools from the strict domination of college entrance requirements and, in 1895, as a member of a second committee of the National Education Association, the Committee of Fifteen, which had much influence upon the future training of teachers and school organization, particularly the correlation of studies in the elementary schools. As United States Commissioner of Education from 1889 to 1906, the longest term to date, he continued to analyze and interpret the functions of the school, emphasized its importance as a social agency, and through his statements of principles gave enduring guidance to the educational efforts of those who were to follow him.

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[3] For a condensed statement of the educational organization near the close of the previous century, see: Harold Rugg, *American Life and the School Curriculum* (Boston: Ginn and Company, 1936), pp. 165-66.

CHARLES W. ELIOT (1834-1926)

Scholarly, dignified Charles Eliot is best known to the public for his long and distinguished service as President of Harvard University, yet he was one of that group of educational reformers who left a clear imprint upon public school education. The revolutionary advances which he sponsored during the early years of his administration at Harvard had reciprocal effects upon the secondary schools of his day. His insistence upon heightened college entrance standards naturally improved the standard of work done in the high schools and his provision for greater liberality in the entrance units acceptable for college admission permitted greater breadth in the secondary offering. Likewise, his stated belief in the efficacy of seeing, hearing, and feeling as teaching appeals gave impetus to vocational education at the lower level.

Eliot's direct service to public education was largely concerned with his public addresses and his chairmanship of an important educational committee. In 1888, presenting a paper before the National Education Association on the subject, "Can School Programs be Shortened and Enriched?" and four years later before the Department of Superintendence on, "Shortening and Enriching the Grammar-School Course," he asked for better prepared teachers and for departmentalized teaching, thereby starting a nationwide discussion of a regrouping of the public school grades. Not until 1890, it might be noted, was the secondary school level recognized in the reports of the United States Commissioner of Education as a distinct classification.

As a result of the interest created in the problems of secondary school reorganization by Eliot's papers (although it should be pointed out that he was not the originator of the movement, it having been initiated earlier by men engaged in secondary-school work) he was invited to head the Committee of Ten, a body now generally recognized as among the most famous and influential groups in the history of American education. The Committee of Ten was a master committee made up of nine subcommittees appointed to study nine fields of the secondary curriculum. It is interesting to note that the fine arts and the vocational subjects were not represented by subcommittees and that each subcommittee evinced the conviction that its subject should be accepted for college entrance. The report of the major committee, rendered in 1893, would be open to attack today for its affirmation of the doctrine of formal discipline and the lowered value which it assigned to modern languages and English as opposed to the classical and scientific subjects, but it did serve to release the secondary schools from the strict college entrance requirements built up around the fields of mathematics and classical languages. Moreover, it advocated the introduction of secondary school subjects at a level below the ninth grade, suggested the possibilities of a 6-6 plan of organization, which had been adopted by France and Japan some few years previously, and called attention to the fact that secondary education might serve the purpose of college preparation for some students while for others its mission might be distinctly vocational and terminal.

Despite the wide discussion given to the pronouncements of Eliot's committee, for at least fifteen years no accomplishments of lasting note were made toward reducing the time spent upon preparatory education or in effecting a change in the conventional relationship which existed between the elementary and the secondary grades. On the contrary, his condemnation of the public school program was followed by a prolonged period of rigid standardization of the curriculum. However, his argument that the content of the studies was of more importance in education than the method of presentation was not lost sight of by the more liberal element, for he was chosen Honorary President of the Progressive Education Association when it was organized in 1918. His insistence that a liberal education involved acquaintance with arts built upon certain natural and physical sciences gave support to the scientific movement and further secured his place in the vanguard of those whose thinking gave direction to educational developments of the present day.

WILLIAM JAMES (1842-1910)

William James, for many years a professor at Harvard, undoubtedly well deserved the title of the pioneer of American psychology. His studies in Europe in the early days of the Wundt laboratory imbued him with the attitude of the experimentalist and he became an ardent exponent of functional psychology. Through his copious and lucid writing, particularly his two-volume *Principles of Psychology,* his *Psychology: Briefer Course,* and *Talks to Teachers on Psychology,* he did much to popularize the biological point of view of man as a behaving organism. Although some of his teachings, particularly his belief that the human mind was open to the acquisition of few if any new ideas after the age of twenty-five and his statement of the laws of habit formation, have since been disproved by Thorndike and others, James nevertheless paved the way for the so-called new school of educational thought. Pragmatic in his philosophy, James' views gained current circulation among educators at about the time that Dewey was beginning his work as director of the newly established School of Education at the University of Chicago. His was the thesis of active learning which Dewey carried forward and upon which later educators were to build their activity programs. "Education," said James, "is for behavior and habits are the stuff of which behavior consists." Although it remained for later psychologists to formulate the statement that there is no impression without expression, he gave backing to the conviction of the neo-Froebelians that the growth of body and mind demanded motor expression. Thus active learning replaced the passive listening and memorizing of an earlier day. While maintaining that human beings are mere bundles of habits, James did point out that the meaningful response is an integrated process in which verbal expression and inner mental activity share importance with the overt act. With this stand most modern psychologists now agree, holding that mental activity and not the grosser bodily movements with which it is associated is the really significant aspect of human behavior. James also wisely called attention to the fact that education may at times demand the suppression of overt activity as well as its stimulation. In short, James would have us aware of the influence of the whole situation upon the learning process. His was the contribution of the concept of education as growth, of learning as an active experience.

BOYD H. BODE (1873-)

If Boyd H. Bode must be aligned with either of the two educational movements which were stirring at the beginning of the twentieth century, the scientific and the progressive, he must undeniably be listed as a supporter of the latter, although his trenchant pen and witty tongue, quick to lash out against fallacies in all theories and philosophies, would brand him as an eclectic. Bode's contribution to modern education is not as the originator of a new educational doctrine but as one who gives clarification and friendly criticism to the doctrines of others, particularly to the progressive movement. This characteristic is well illustrated in his recent book, *Progressive Education at the Crossroads,* in which he foresees nothing but chaos resulting from attention to the children's needs and interests to the exclusion of all else. A sense of direction is his plea as he urges that the schools so teach that democracy is made a way of life for the pupils and not a series of unrelated activities devoid of logical organization. Democracy, he points out to the gratification of the advocates of the new school, is participatory group life which at the same time offers respect for personality. Bode's democracy stresses not the equality of man but the worth of man; it is not necessarily synonymous with political democracy and can be shared in by all only through the extension of educational opportunity.

With characteristic bluntness, Bode accuses some of his fellow educators of "throwing out the baby with the bath water" in rejecting general education along with the doctrine of formal discipline, pointing out that there is room for both general and specific education. Likewise, overstress on the matter of scientific education may cause neglect of the equally important philosophical point of view, and he insists with equal clarity that an education which separates cultural education from vocational education smacks of autocracy rather than democracy. All branches of learning, whether they be science, literature, vocational subjects, or art, contribute to the all-important job of fitting the child for democratic living.

The S-R or bond theory of psychology comes in for vigorous attack at Bode's hand. This theory holds that learning, or education, consists in the acquisition of thousands of specific responses to specific situations. Development, he insists, not the filling of a number of empty reservoirs, is the function of the schools. In this regard he is again clearly in the camp of the progressivists, for he makes of education an unfolding of potentialities rather than the addition of specific habits.

In his *Modern Educational Theories,* Bode attacks with equal vigor some phases of the project method, bringing out the limitations of activities that have no other purpose than mere activity itself. *Conflicting Psychologies of Learning* has done much to clarify the understanding of intelligence. The cultivation of thinking and not the building up of a series of responses, he explains, should be the aim of education. His stand for the orientation of the individual in his world is not unakin to Dewey's philosophy. Variation, selection, adaptation, terms of the evolutionists, have a prominent place in the writings of this educational philosopher of Ohio State University and have been passed on to countless teachers who have been influenced by his publications.

WILLIAM CHANDLER BAGLEY (1874-)

Regarded by some as the bane of the progressivist's existence and by others as a governor which prevents the new movement from running wild, stands W. C. Bagley. For many years Dean of the School of Education of the University of Illinois, Bagley is now Head of the Department of Teachers College and Normal School Education of Teachers College, Columbia University. A conservative but by no means a reactionary, and not professing to be a philosopher but a technologist or methodologist, he nevertheless amasses an imposing list of arguments against the new school philosophy.[4] This severest critic of the child-centered school, who would "rather be right than Progressive," has recently helped to organize a number of like-minded educators into a group called the Essentialists as a counter-force against the liberal tendencies of Dewey and his followers. "The only freedom that is thinkable today is disciplined freedom," says Bagley,[5] expressing what might well be regarded as a rallying cry.

His indictment of the school that offers mental lollypops to induce children to learn is sharp indeed. Opposing tendencies that would ''weaken the fiber of education'' and pointing out the need for ''a tincture of iron,'' Bagley contends that the child-centered school cannot treat the materials of the curriculum adequately or thoroughly, that there is real danger in placing so important an institution at the mercy of the whims of children, that the program is not organized in such a manner as to lead progressively toward the worthy objectives of education, that the entire procedure is likely to produce incoherence and disorganization, and that overt activity is emphasized at the expense of logical thought and inner mental activity. The end and aim of education is social stability, which cannot be fostered if aimless change in educational programs follows every change in the conditions of social life. In his zeal for discipline and uniformity Bagley can scarcely be accused of desiring to roll additional boulders into the pathway of learning, but he would probably not want to remove any or to detour around them. The progressives ignore the biological fact of an extended period of immaturity in the human offspring, Bagley claims, and insists that instead of accepting it as a gift each successive generation must win its own freedom only after undergoing training, control, and direction at the hands of the adult generation. He seems actually to fear a weakening of the social fiber and stamina under the program of the liberals.

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[4] For a convenient, tabular listing of the main arguments for and against the child-centered school, see: Alonzo F. Myers and Clarence O. Williams, *Education in a Democracy* (New York: Prentice-Hall, Inc., 1937), p. 111.

[5] W. C. Bagley, *Education, Social Progress, and Crime* (New York: Macmillan Company, 1931), p. 40.

Bagley's work in the preparation of teachers reflects a consistent attitude. Although he opposes opportunism, hedonism, and unplanned organiation, he does not advocate formal, routine drill teaching. Social efficiency is the criterion by which the ''stalwart'' school of teaching selects its materials. Teaching, he reminds his students, is a serious business not to be approached in an attitude of lightness. Its difficulties present a challenge to those who enter upon their work soberly. To Bagley is generally accorded the credit for originating the term professionalized subject matter, a concept under which methods and subject content are integrated. Since, as he sees it, habit is nine-tenths of life, the formation of correct habits becomes preponderately important in the Bagley school of thought.

WILLIAM HEARD KILPATRICK (1871-)

To Doctor Kilpatrick must go much of the credit for making the elementary school the most progressive of the units of the modern educational organization. For over a quarter of a century, through his writings and through his classes at Columbia University, where he served for many years as Professor of Education until his retirement in 1937, and through his lectures before and since that time, he has been the interpreter of progressive education. Although he is an ardent admirer and advocate of the Dewey school of thought, he is not, as many of his critics would have it, a mere satellite of the master. To the growing body of literature of the progressive school, Kilpatrick has contributed much. General policies for the guidance of conduct and a system of values are established by philosophic inquiry, he holds, and with a philosopher's logic he has clearly stated the aims which he sets for education.

In fact, as he declares, since education is not an exact science it must be approached from the philosophical point of view. By such treatment he took issue with the laboratory psychologists, insisting that it is not sufficient to be able to give back learning on command. The principles of biological evolution and the dynamic psychology of James he integrated into a philosophy of educational method. To his teacher-students he has held forth the philosohpy of growth through creative experience.

When the project method was coming into prominence, Kilpatrick was one of the leaders of the movement. The essence of the project method was the centering of learning around a specific task rather than following the traditional arrangement of the conventionally organized subjects. When the project method gave way to the newer activity teaching, Kilpatrick was in a strategic position to assume a commanding place in the new undertaking. He has always been an exponent of the democratic method, disfavoring any prearranged order which would rob the pupils of the adventure of discovery. Learning to him is synonymous with living. In his philosophy, drill is secondary to life demands, and subject matter should be introduced only when it meets the needs of present behavior.

Unlike Bagley, Kilpatrick feels that social change should be anticipated by preparing a citizenry who are accustomed to meet new situations and to deal with them as the occasion demands. Not only will the building of a social intelligence fitted to deal with inevitable social changes fulfill the primary mission of education, but it will minimize the restricting influences of one's vocation by broadening the social outlook. It was in fact Kilpatrick who criticized the Winnetka school sytem, undoubtedly an organization well worthy of a place in the ranks of the progressives, for its undue emphasis upon individual pupil development at the expense of social contacts and group co-operation.

Comprehending education as a social force, Kilpatrick sincerely fears for the future of democratic society when he observes the absence of democracy in the organization and operation of some of the schools of the present day. When we have produced a better program of adult education or a better educated generation of adults, he argues, then can the time of children in the schools be devoted to an education suited to to their own evolving needs.

Although Rugg coined the term the child-centered school, Kilpatrick has driven its fuller implications home to thousands through his lectures and his teachings. In other fields of education, too, he has been active. He served as a member of the Commission on the Reorganization of Secondary Education which, in 1918, formulated the famous Cardinal Principles of Secondary Education. The kindergarten has felt his influence through his work in the experimental schools. Instead of relegating the teacher to a minor position in the new school, as many persons might suppose, he specifically remarks upon the importance of the teacher as a guide and stimulator to the child's independent thinking. It is Kilpatrick, incidentally, who insists upon the term teacher education rather than teacher training, thus giving concrete evidence of his high regard for the professional worker.

JOHN DEWEY (1859-)

The name of John Dewey is inseparably linked with the child-centered school, the only actual reorganization, many claim, that education has ever undergone, all other changes being more in the nature of rearrangements. He is not the originator of the movement. It contains the elements of many theories formulated by his predecessors and some of his contemporaries. But by the magic of his philosophic touch he has been able to weave them together, add his own contribution, and give the whole a practical application and setting. The movement may be said to have originated with Rousseau as a protest against abstract formalism, was handed on by Pestalozzi and Froebel, and was developed by Dewey. Dewey himself insists, however, that although his principles are greatly similar to Froebel's, they were derived independently and it is certain that his procedures were not so stereotyped. From Darwin's *Origin of Species* he probably received inspiration for his concept of growth as the purpose of education. James' studies revealed to Dewey the active character of experience, and with James and the contributions of the laboratory psychologists and his own philosophical insight he was able to formulate his third concept—the integrated nature of human responses. His studies at Johns Hopkins under G. Stanley Hall, too, certainly gave direction to his advanced thinking.

Negatively speaking, he was influenced by Herbart, having protested as early as 1895 against the Herbartian doctrine of interest in a paper read before the Herbartian Society. His plea was for a new pedagogy.

After ten years of university teaching in the departments of philosophy of the University of Michigan and the University of Minnesota, Dewey joined the staff of the University of Chicago in 1894. Here, two years later, with his wife acting as principal, Dewey founded his famed Laboratory School. From its example more than fifty similar schools have sprung. It was at about this time that people were beginning to be conscious of the sweeping industrial and social changes which the nation was undergoing. It is not surprising, therefore, that a study of industries occupied the attention of the pupils of his experimental school and that vocational training, but more for social understanding than for a utilitarian purpose, was given a prominent position in the program of studies. Movable desks, it is interesting to note, were a part of the classroom equipment. Here Dewey gave concrete expression to his often repeated dictum that ''the school is not preparation for life; it is life.'' Here he put into practice the thesis, later to be broadcast to the world through the pages of his memorable work, *How We Think,* that one learns to do by doing. His was certainly not a ''sitting and listening'' school.

Upon the death of Parker in 1902, Dewey became Director of the School of Education of the University of Chicago, his own experimental school being one of four organizations which were fused to create the new School of Education. Again it is interesting to note that he early applied a regrouping of the grades, his laboratory school and the high school section of the Department of Education comprising an eleven-year organization. During the same year another of his most noted books, *The Child and the Curriculum,* came from the press. In it he voices his protest against the tendency of the conventional subject offering to break the child's world into small and often unrelated parts. His remedy is to put into practice the concept that "the child and the curriculum are simply two limits of a single process."[6]

Dewey left Chicago in 1904 to assume the position of Professor of Philosophy at Teachers College, Columbia University, where he served until his retirement in 1930. His life at Columbia was an active one, filled with writing and lecturing which did not cease with his retirement. He is truly an international figure, some of his books having been translated into many languages. In the days shortly after the Russian revolution he acted as advisor to that government in setting up an educational program, including adult education, in conformity with progressive principles, although it should be observed that of late there has been a noticeable swing toward more formalized training in that country. He has also acted in an advisory capacity to other governments. He succeeded Eliot as Honorary President of the Progressive Education Association and his philosophy has inspired such innovations as the Gary School and the Winnetka Plan. The John Dewey Society for the Study of Education and Culture was founded to honor and perpetuate his teachings. It should be mentioned, however, that although Dewey himself stands opposed to indoctrination as inimical to the child's free development and his preparation for the acceptance of inevitable social change, this Society would work directly for a new social order.

Dewey's child-centered school has been the subject of much discussion and no little bitter debate during the past forty years.[7] Rugg[8] lists the factors in the progressive school as the school, society, the child, and the curriculum. Dewey himself has recently enumerated the principles of the newer education as including opportunity for the cultivation and expression of individuality, free activity, and learning by doing. Skills and techniques are taught not primarily for their disciplinary or future values but as tools for dealing effectively with the opportunities of present life. Since societies cannot be created out of whole cloth, an appreciation of the forces that make and shape society is vital. In direct opposition to Bagley, Dewey holds that discipline is positive and that morality is best acquired through the cultivation of co-operative motives and through the development of a large and inspiring social policy. Thinking is the tool that makes for freedom, but the mere possession of information does not guarantee straight thinking. Enthusiasm must be aroused. The guidance of conduct must rest upon ideas that become motive forces. It is impossible, he believes, to set for education such specific objectives as may be created for some of the more exact sciences such as engineering, agriculture, or medicine.

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[6] John Dewey, *The Child and the Curriculum* (Chicago: University of Chicago Press, 1902), p. 16.

[7] For an especially good summation of the case of the subject-matter versus the activity organization, see: William H. Burton, *Introduction to Education* (New York: D. Appleton-Century Company, 1934), pp. 408-14.

[8] Harold Rugg, *American Life and the School Curriculum* (Boston: Ginn and Company, 1936), p. 17.

Dewey's chief influence has been in the field of elementary education, but his pragmatic philosophy has touched all divisions of the educational ladder. In *Experience and Education,* one of his more recent publications, he takes issue with President Hutchins' stand for intellectualism in higher education, pitting against it the philosophy of experimentalism. The Progressive Education Society, with which his name is so inseparably linked, has carried his doctrines outside the realm of the private and the elementary schools and is now a potent force in secondary education.

In any appraisal of the works of John Dewey it should be remembered that his was largely the role of the pioneer and that a certain overemphasis is to be expected of one who would hope to have a part of his own enthusiasm caught and retained by others. Too literal an acceptance of the doctrine of "no impression without expression," for instance, may blind one to the desirability of repressing some forms of overt behavior. If one examines his pronouncements closely, however, he detects a restraint which even some of his closest followers have apparently failed to practice. In spite of his opposition to the earlier beliefs that knowledge is power and that education should be a period of preparation for adult living, Dewey is not unmindful of the contribution which subject matter has to make to a proper understanding of the social structure. He would not rule out the social inheritance. In spite of his pragmatic philosophy, he does not attempt to claim that the democratic method is necessarily the easiest road to travel. It is Dewey himself who cautions against the dangers of adopting too narrowly one single point of view.

Much of the misunderstanding of Dewey's philosophy is due to some of the best friends of the progressive movement who, in the zeal of emulation, have gone beyond their leader and credited him in the public mind with principles which he never advocated.[9] Saner followers have avoided the fanaticism of the extremist. The outcomes claimed for the new school are difficult to measure, but in the light of a few published studies there is probably not a great deal of difference in the accomplishments of the conventional and the progressive schools when the best representatives of each are compared. Similarly, the progressives and conservatives have much to share in their hopes and ambitions for public education when one examines the statements and practices of those who have avoided riding the pendulum to either extreme of its arc.

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[9] A clear statement of Dewey's philosophy is contained in his "My Pedagogic Creed," reproduced in the *Journal of the National Education Association,* XXIV (January, 1935), 13-16.

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Philosophical
Backgrounds

PART III

PHILOSOPHICAL BACKGROUNDS

Equalitarianism and Social Gradation
Humanism and Humanitarianism
Pragmatism and Idealism
Liberalism and Literalism

X. EQUALITARIANISM AND SOCIAL GRADATION

IN 1928 Dr. Frank D. Boynton, of Ithaca, New York, was elected president of the Department of Superintendence of the National Education Association. The bestowal of this office was largely a recognition by school officers of his campaign for what he called ''the open door in education.'' It was his contention that colleges were not in sufficient degree taking cognizance of the growing numbers seeking admission to higher education, that ''selecting only from the upper quartile'' was a totally unacceptable euphemism, and that

> when we ask what is to be done with the lower quartile where, not infrequently, are to be found the real leaders—youth aglow with the vitality that often finds expression outside of academic halls, sometimes to the detriment of academic records, but in which one can read the assurance of future success, in answer to that question we hear only a great silence.[1]

Superintendent Boynton did not argue that every young person was fitted for college work, but he did urge an extension of academic opportunity, which, he felt, was in complete harmony with a basic American principle. He phrased it thus:

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[1] Frank Boynton, "Again the Open Door in Education," *The Journal of the National Education Association,* XVI (1927), 102.

> There is a doctrine that is fundamental in American education, and that is: that every child born in, or adopted by this republic has the right to have developed through education whatever of talent he may possess without reference to quantity, quality, or type of that talent, and that he should have assured to him the opporunity to go as far as his ability and ambition will permit.[2]

This kind of statement is but a single indication of how American education reflects one of the full-running currents of our times—the movement toward sharing. Today the center of greatest pressures in social controversy is that of economic distribution. Not only in America, but throughout Western civilization, lines of struggle are being drawn in terms, on the one hand, of mass aspiration toward sharing, and, on the other hand, of centered control of the world's material resources. In the United States one needs but review briefly the rapid concentration of political action upon economic problems during the administration of Franklin D. Roosevelt, the wide-spread clashes between labor and capital, the growth of the significant labor movement known as the Committee for Industrial Organization, under the leadership of John L. Lewis, and our participation in a world-wide struggle begun by those whose leaders openly call themselves "the have-nots," in order to give point to such an observation.

THE TENDENCY TOWARD EQUALITARIANISM

There has been a singularly uniform tendency in Western civilization as a whole for more and more men to share privileges—an inevitable outcome whenever human aspiration is permitted to function. It has been aptly said that human physical inequality disappeared with the invention of gunpowder. Physical prowess is still acknowledged, physical deficiency is still admitted; but neither has now the significance it had in the days when swords and battle-axes decided major issues in civilization. Religion, in the days of Ramses, or Tiglath-Pileser, or Nebuchadnezzar, was a matter of high privilege. One of the most revolutionary qualities of Christianity was its appeal to the aspiration of all conditions of men. Political inequality has been the ground of an epic struggle in Western Europe and America from the days of feudalism and Divine Right onward through crises resulting in the Magna Carta, the Bill of Rights, the Declaration of Independence, and the extension of suffrage from property owners and church members to all men, white or black, and finally to women. But part of the revolt against political absolutism was rooted in an ambition for economic freedom. Much of this ambition was realized in the growth of middle-class capitalism and industrialism, but out of the victory grew new bases of inequality. Again, particularly in America, the eradication of inequalities in culture and knowledge—those possessions so obviously potent in any social scale—has been sought through the process of free public education. That is, through Western civilization, because of the working of human aspiration and the spread of knowledge by which much of that aspiration has been stimulated, a leveling process has been pretty constantly operative. Yet differences in individual endowment and possession continue to be obvious and to be accepted, perhaps by the majority of the people.

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[2] *Ibid.*

The term *equal* is an ancient one; the word *equalitarian*, now common, was declared rare in the Century dictionary of twenty years ago; and *equalitarianism* is of still more recent minting. Its rise into the modern vocabulary indicates a sharpened consciousness with respect to movements and aspirations of age-long standing; and it has come, perhaps for the first time, to be recognized as indicating a position that large groups of men who are engaged in the struggle for greater privilege periodically assume.

Primitive forms of society, because of the uniformity of interests within a given group and because of the fears attendant upon ignorance, are fairly simple. With the growth of knowledge and the growth of interests there follows an inevitable diversification of pursuits, skills, avocations, and acquisitions. Thus varying degrees of power and prestige develop among individuals and classes, for the human mind has never assigned equal values to the many varieties of human possessions or the products of human skills. Gradations in the social scale would appear, therefore, as altogether natural. However, there have been movements from time to time in the Western world tending to place special emphasis upon man's equality, springing principally from three sources; namely, religious insight, philosophic deduction and—oftentimes opposed to the first two—intensely practical situations.

EARLY SOURCES OF SOCIAL LEVELING

Some people think of the Government of the United States as representing the most advanced form of democracy, but when Professor T. R. Glover, of Cambridge University, lectured at Rice Institute in 1925, he emphasized the fact that, in many respects, it is not as democratic as was the ancient city-state of Athens. He said:

> I hear of a President of the United States; there was none in Athens. . . . I hear of a Supreme Court, and of judges there, who can overturn the laws and frustrate beyond recall the will of the American people. That humiliation never overtook the Athenian people, for they were their own Supreme Court. . . . America lacks the two essential qualities of a democracy; the people there neither make the laws nor interpret them.[3]

At one time equality of citizenship in Athens was so completely achieved that certain offices were distributed, not by election, but by lot. This was made possible, no doubt, by the high average intelligence of Athenian citizenry. Galton estimated that it ranked as much above that of Europe toward the end of the nineteenth century as the latter stood above the intelligence of the African Negro. However, it must be remembered that Greek democracy stood upon the shoulders of a slave class, and that Athenian privileges, after Pericles, were reserved to those who could boast Athenian parentage. Moreover, that very condition which enabled Athens to preserve this equality brought its downfall, for within the Greek empire Athenian citizenship became really the badge of a class, regarded by those outside the city as an aristocracy to be overthrown.

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[3] T. R. Glover, *Democracy in the Ancient World* (Cambridge: University Press, 1927), pp. 56-59.

Rome likewise had its period of democracy, during which, harking back to a sturdy, self-respecting rural origin, its lower social strata successfully challenged patrician dominance in many ways. Democracy is equalitarian to the extent that it provides equal privilege to all citizens; but in the Roman Empire this principle broke down, on the one hand, by way of the gradual assumption of power and social prestige by the inhabitants of the city itself, and on the other, by way of the evils resulting from mass doles.

Without doubt the most distinct and permanent influence toward equalitarianism in the Western World, however, has been that of Christianity, particularly through the teachings of its founder and his early followers. Jesus obviously recognized variation in human ability when he recounted the parable of the talents. According to the accounts in the gospel of Matthew each servant was alloted his amount ''according to his several ability.'' Yet upon the conclusion of an efficient term of service each one received the same commendation, irrespective of the actual amount of profit he had gained for his master (though this is not true according to the story in Luke's gospel). Further, it is significant, perhaps, that the worthy should be separated from the unworthy ''as a shepherd divideth his sheep from the goats.''

Here appeared the great sundering blade setting apart the saved from the lost. The imagery of this awful event burned itself so deeply into the Western soul that it has never been eradicated, and before it all the other inequalities of man sank into insignificance. To conceive of oneself as numbered among that countless band of the blessed was, indeed, to lose one's sense of identity; but on the other hand, such a pronouncement, falling upon the ears of the socially outcast of this world, roused a new and eager aspiration; in the end, a man's worth was not to be judged by his possessions or his power or his prestige; the most miserable of men might join the host of the redeemed. In a Roman world of master and slave, citizen and alien, city aristocrat and country bumpkin, a doctrine that preached worth and spiritual equality to outcasts and underlings was sure to be cherished to the last point of desperate defense.

Some of the disciples urged submission to authority; but to suffer subjection to earthly powers is no great indignity, provided one may look forward to princely rank in a celestial kingdom; it is a burden to be borne only unto the day of delivery. On the other hand, in such an epistle as that of Saint James, there may occur a forthright attack upon privilege. The Twentieth Century New Testament version phrases one of these as follows:

> My Brothers, are you really trying to combine faith in Jesus Christ, our glorified Lord, with the worship of rank? Suppose a man should enter your Synagogue, with gold rings and in grand clothes, and suppose a poor man should come in also, in shabby clothes, and you are deferential to the man who is wearing grand clothes, and say—"There is a good seat for you here," but to the poor man—"You must stand; or sit down there by the footstool," is not that to make distinction among yourselves and to show yourselves prejudiced judges? Listen, my dear Brothers, has not God chosen those who are poor in the things of this world to be rich through their faith, and to possess the Kingdom which he has promised to those who love him? But you—you insult the poor man! Is it not the rich who oppress you? Is it not they who drag you into law courts? Is it not they who malign that honorable Name which has been bestowed upon you?[4]

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[4] *The Twentieth Century New Testament* (New York: The Fleming H. Revell Co., 1904), pp. 276-77.

The organization, the rites, the doctrines and the manner of life of the adherents of the early Church were necessarily extremely simple. Wealth, long tradition, prestige of any sort were all lacking. Gradually, however, by the work of missionaries and their epistles, and the correspondence among the congregations themselves, synods were built up and the work of unification commenced. By the end of the third century authority had developed at Rome, and before long, the older, purely democratic forms passed out of existence. It is too much to expect that the explanation of the universal fate of man should remain in the custody of scattered congregations. Just as, today, science and philosophy tend to become linked with institutions, to be preserved and fostered by those institutions, so the Church became the harbor and the instrument of propagation of this early doctrine. And with the growth of that organization's potency came esoteric orders, rules, titles, and the acquisition of property. Classes grew within the Church, resulting in the Roman hierarchy with its skillfully appealing scale of advancement from poor village priest to cardinal and pope. Outside the Church, but often interlocked with it, there grew up the institution of feudalism and the classes of society that it fostered. Both institutions were involved in the perpetuation of the famous theory of the three classes—"a clergy born to pray, a lay nobility born to rule and to fight, the great mass of mankind born to labor for the physical maintenance of the higher orders." Even the Church of the twelfth century had lost the vision of man's importance as an individual in the eyes of God.

> Clerics of the time of Philip Augustus could not altogether forget that the Founder of their religion had preached the respect of the weak and humble, had exalted poverty, and given the Church an essentially democratic basis. . . . But one must also consider another side of the ecclesiastical life and feeling, for there are other things and other facts which prove that in reality the clerics of the middle ages showed almost as much cruelty to the peasants and burghers as did

the men of the sword. . . . The sentiments and acts of the privileged religious aristocracy dominated. This aristocracy, proprietor of considerable lands and enormous numbers of serfs, both male and female, was an integral part of the feudal system. It sought to preserve its rights and revenues; it defended them with jealous harshness, and succeeded all the better because the lands were inalienable.[5]

THE REFORMATION

The shift to individualism came prominently, of course, with the Renaissance and the Reformation. The latter, it must be remembered, originated and continued within the Church, as well as outside it, and it is interesting to us in America to find that some of the first stirrings of revolt against old and hardened modes of thought occurred in England as a result of the proposals of John Wycliffe. This influential churchman had the termerity to proclaim the clergy entitled to dominion and to property only to the extent that they maintained their righteousness, and that decisions in all questions of property should rest with civil authorities. He was communistic in theory, and, more significantly, held the view that the sacraments and offices of the priest were not essentially necessary to the relationship between God and the individual Christian.

How much Wycliffe's doctrines advanced the cause of democracy it would be difficult to say. It was a period of general unrest in England, and the Peasants' Revolt of 1381 was an indication of the running of at least a temporary tide. One of the leaders of that rebellion was a monk by the name of John Ball, who preached a sermon at Blackheath from the famous couplet:

When Adam delved and Eva span,
Who was then the gentleman?

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[5] Achille Luchaire, *Social France at the Time of Philip Augustus,* tr. by E. Krehbiel (New York: Peter Smith, 1929), pp. 389-90.

The tenor of this appeal was that the time was now ripe for a general leveling process. Whether he advocated violence or an appeal to the King remains in doubt; the important point for us is that this movement openly espoused the cause of equalitarian privilege for the lower classes.

The more permanent outcome of Wycliffe's ''heresies'' in England, however, was the development of the sect known as the Lollards. ''It is hard,'' as Henry Osborn Taylor puts it, ''to see in them more than faintly glowing embers,'' but it is significant to observe that descendants of the early founders of this sect were among those who welcomed the ''new learning,'' as Lutheranism was called when it crossed the English Channel. Undoubtedly, in the century and a half between Wycliffe and Luther there was a survival of the old heresies in England.

And while these embers of English insurgency continued to smolder, a sudden burst of flame appeared in Central Europe. John Huss, a Bohemian priest, expounded the doctrines of Wycliffe with such effect upon the populace that he was executed by the authorities in 1415, but an uprising followed. One of the springs of this action is to be found again in peasant resentment against the landowners; and it is significant that one section of the Articles of Prague, drawn up in 1420, contained the statement:

> The secular power over riches and worldly goods which the clergy possesses in contradiction to Christ's precept, to the prejudice of its office and to the detriment of the secular arm, shall be taken out and withdrawn from it, and the clergy itself shall be brought back to the evangelical rule and an apostolic life such as that which Christ and the apostles led.

Whatever the weight to be attached to arguments that the Reformation was largely a political movement, there can be little doubt that there was also a genuine reversion to a sense of the importance of the downtrodden in terms of that ''apostolic life'' in which men took no account of rank and riches.

This ideal is stressed by all the reformers, and finds expression in one of the most significant teachings of Martin Luther —the priesthood of the believer. It must be remembered that modern Protestantism is, for great numbers of its members, quite as authoritarian as Catholicism. That is, in the process of division of the Christian Church, a section of the membership shifted from Church authority to Book authority —that of the Inspired Word. But it was Calvin, not Luther, who fostered this movement. The latter, in matters of religion, went the whole democratic way in his emphasis upon the common man's right of access to the Scriptures and his right to interpret them according to his own conscience. Yet, though, like Zwingli and Huss, Luther came of peasant stock, he was no leveler in the political sense. His support came largely from wealthy burghers; authority, such as must needs be, he assigned to the state, and during the Peasants' War he not only sided definitely against the rebels, but urged the severest violence against them.

However, as so often happens in the process of revolt, there were implications in Luther's teachings soon to be seized upon and carried to lengths he had not foreseen. Among the incendiary preachers of this period of religious excitement was Thomas Münzer, who urged revolt against all authority and the establishment of a Christian commonwealth with absolute equality among men and the community of goods. Münzer was executed, but the movement which he and others had initiated some four years previously continued. These followers—known as Anabaptists—were not satisfied with Luther's reforms, which, they declared, were not sufficiently drastic. They not only insisted upon returning to the Scriptures for guidance, but advocated, more significantly, the "apostolic" manner of life. In Switzerland, particularly, their numbers included a group of scholarly leaders, but their doctrines were disseminated through The Netherlands and into England, largely by way of the artisan classes. In 1567, following the persecution in The Lowlands by the Duke of

Alva, many thousands of these people settled in the English counties of Norfolk, Suffolk, and Essex. They never became Lutherans nor Zwinglians; they were too insistent upon a religion divorced from the abuses of class. It is said that English Anabaptists often made a practice of memorizing the Epistle of James.

Here undoubtedly was a direct influence that carried on into America, though the actual numbers of the sect to reach this continent in early Colonial times were probably small. Associated rather closely with these, also, though milder and not agreeing to all their doctrines, were the Mennonites; and it is well known, of course, that large colonies of these have flourished in many parts of the United States from Colonial times down to the present.

PURITANISM AND SEPARATISM

We come now to that period in the religious life of England with which the early history of the American Colonies is so closely bound up. The English Church, under Henry VIII, had broken away from its allegiance to the Pope, but Church and state became completely affiliated. Up to the coronation of George VI, in 1937, the King of England remained the nominal head of the Anglican Church. The point that is so difficult for the modern American to grasp is that dissent from any of the doctrines of the Church even in the England of the sixteenth century counted as treason against the state, and was to be treated accordingly. But that which, under such circumstances, became the most obnoxious of heresies was, naturally, the advocacy of actual separation of Church and state. The man to whom is usually accorded the honor of having first openly promulgated this doctrine in England is Robert Browne, who fled to Holland and took up residence with his congregation in Middelburg, in 1581. Although he later apostatized and returned to the fold of the Established Church, his doctrines continued to spread, until by 1593 it has been estimated that the sect—the names *Brownist* and *Separatist* were virtually synonymous—numbered at least twenty thousand people, living chiefly in London and the east counties of England, where, as we have seen, the Anabaptists had settled, and by whose doctrines they had undoubtedly been affected.

At this time, however, the English authorities, becoming alarmed at the spread of the sect, passed the Act of Banishment, by which all persons more than sixteen years of age were subject to exile from the country upon absenting themselves from church or saying anything derogatory to royal authority. This statute reversed the effect of the Catholic persecutions and sent large numbers of people back across the North Sea to Holland, where by reason of that country's liberality with respect to the press, they were able to flood England so thoroughly with their pamphlets that the Act of Banishment was repealed, though persecution of those still in England was not abated. It was thus, early in the seventeenth century, that the little congregation of Separatists at Scrooby escaped with their pastor, John Robinson, to Leyden, and then later, in 1620, landed in America to establish Plymouth Colony.

> With the parting words of Robinson still ringing in their ears, the Pilgrim Fathers convenanted and combined themselves into a civil body politic for their better ordering and preservation. The Act was duly drawn up and signed by all. It is characteristic that among the signatures of the first political document inspired by Independency should be servants and common sailors. . . . The democratic Church had grown into a democratic State. And although New Plymouth remained a separate community till towards the end of the century, its influence over subsequently founded colonies was very great.[6]

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[6] Gooch and Laski, *English Democratic Ideas in the XVII Century* (Cambridge: The University Press, 1927), pp. 63-67.

No one outstanding leader can be named, perhaps, as originating in this colony, but there came to it in its early years (1631-1633) a man whose thinking was to leave its impress upon the whole future of the nation to grow from these colonial beginnings. That man was Roger Williams, born about 1604, son of a merchant tailor and cloth dealer in comfortable circumstances in the London suburb of Smithfield. He had perhaps witnessed some of the last executions for heresy for which that quarter was famous. As secretary to the famous Sir Edward Coke he obtained some insight into the law, and possibly it was from this source that he derived that love of debate, even to the point of sententiousness which sometimes marred his controversies. He undoubtedly deserved the epithet, ''A New England Firebrand.'' He burned with an unquenchable energy, disturbing again and again the otherwise orderly process of men's minds and the calm certainty of their souls.

Although, like other New England divines, he had begun his ministry in the Established Church of the mother country, by the time he reached these shores, he had advanced well beyond Puritanism into a thoroughgoing Separatism. Upon his discovery that the church at Boston had no desire to throw off its allegiance to the Church of England, he refused all connection with it. For two years he lived and worked at Plymouth, then spent three years as ''teacher'' at Salem, where the church espoused a more liberal type of Puritanism; but by this time Williams had so stirred the colony that he received sentence of banishment, which was never revoked in the records of Massachusetts until the Tercentennial of the founding of Providence, in 1935.

Williams was a Separatist, a Leveler, a Seeker, an advocate of religious freedom, a humanitarian, and a thoroughgoing democrat. In the heat of controversy and under pressure of practical emergency he sometimes may have seemed inconsistent, but on the whole he remained faithful to the ideals which he had formed in his early manhood, and by the fearless application of his principles he secured for his followers "as great liberties as any people under heaven." [7]

He went, also, the next logical step beyond Separatism and declared for freedom of conscience.

> "Hence I affirm it lamentably to be against the Testimony of Christ Jesus, for the civil state to impose upon the souls of the people, a religion, a worship, a ministry, oaths (in religious and civil affairs), tithes, times, days, marryings and buryings in hold ground." Instead the state should give "free and absolute permission of conscience to all men in what is merely spiritual . . . and provide for the liberty of the magistrate's conscience also." [8]

As a Leveler he manifestly did not carry his theories into the realm of property.[9] Having observed the abortive attempt at communism at Plymouth, he favored the institution of private property at Providence, and accumulated a considerable estate by trade and investment. As a Seeker, Williams found himself unable to order his ways within the bounds of any religious organization; and he left the Baptist Church at Providence within a few years after its establishment. As a humanitarian he helped abolish slavery within the territory, and by his good offices among the Indians not only alleviated the lot of that group, but on the other hand, saved the Massachusetts colonies, from which he had been banished, from onslaught and possible destruction. As a citizen he was a thoroughgoing equalitarian in the basic Christian sense that

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[7] *Ibid.*, p. 78.

[8] Quoted by James Ernst, *Roger Williams* (New York: The Macmillan Company, 1932), pp. 95-96.

[9] Indeed, there is good reason to question the extreme statements of Cromwell, Prynne, and others regarding the aims of this radical English group. See Gooch and Laski, *op. cit.*, pp. 118-19.

"all are equal in Christ." His life centered in his religion, but in a religion that took its source from the Gospels, not the Pentateuch.

> Persecutors leave Christ and fly to Moses for the practice and Pattern. The *Christian* church doth not persecute: no more than a lily doth scratch the thorns, or a lamb pursue and tear the wolves, or a turtle dove hunt hawks and eagles, or a chaste and innocent virgin scratch like whores and harlots.[10]

As many writers have pointed out, the various colonies in America represented varying degrees of religious liberalism. In the same general area with Rhode Island, Plymouth, and Connecticut (where the moderate Thomas Hooker had helped formulate the Fundamental Orders adopted by the General Assembly of Connecticut—sometimes called "the first written constitution of modern democracy"), there was established the theocracy of Boston upon Hebraic lines. From its very inception it was aristocratic in outlook. Its governing body was made up of a group of English landed gentry; and its guiding authorities were Calvin's *Institutes* and the Old Testament. John Calvin, though his influence made ultimately for popular right, had little confidence in the masses of the people, and at best was willing to concede a government by representation. Indeed in one passage of the *Institutes*[11] he openly advocated the divine right of kings.

Following this line of thinking, it is not strange, therefore, to hear John Cotton, first minister of the Boston Colony, declaring: "Democracy I do not conceyve that ever God did ordeyne as a fitt government eyther for church or commonwealth. If the people be governors, who shall be governed?" —a deliverance now become famous by its frequent quoting.

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[10] From "The Bloudy Tenent of Persecution," quoted by Ernst, *Roger Williams* (New York: The Macmillan Company, 1932), pp. 244-45.

[11] John Calvin, *Institutes,* Book IV, Chap. XX, Par. XXII.

ECONOMIC FACTORS

Besides this political and ecclesiastical tendency towards setting up inequalities among men, however, the Puritan possessed and fostered another tendency which in the end made for constantly widening inequalities in another field—the economic. Calvin in his position of power in Geneva proved himself a thoroughly practical administrator in many ways; and he was consulted not only with regard to religious problems but upon questions of law, trade, manufactures, sanitation, and education. As early as 1189, when Philip Augustus set out upon the Third Crusade, he left in charge of the kingdom, besides the queen mother and his uncle, the Archbishop of Reims, a council including six Paris burghers in whose practical ability he had the utmost confidence. The rise of middle classes is intimately connected with the accession to power of the English Puritans. As Parrington says:

> A prosperous merchant who accounted himself a son of God and who was persuaded that he was fighting for a freer England was no mean foe to be awed by the rustlings of a Cavalier.[12]

This same trait of thrift was transferred to America, with the result that accumulations and reserves of capital commenced, almost from the beginning, to mark levels in the American population—though it should be pointed out that throughout the earlier stages of the country's history it was felt, with some justification, that with the great resources of the continent untouched and open for the taking, every man of energy and ambition possessed practically an equal measure of economic opportunity.

Another influence making for social gradation in early colonial history sprang, of course, from Virginia with its owners of large plantations, its Anglican Church, and its espousal of slavery. America has always had its Tories—those whose allegiance has gone first to institutions of privilege. With those classes has been associated much of the finest culture of the country. Even at the time of the Revolution the emigration of the Loyalists resulted in a cultural loss from which the country perhaps never recovered, but this group and the system they represented were not in harmony with what was to be the keynote of American life.

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[12] V. L. Parrington, *Main Currents in American Thought,* 3 vols. (New York: Harcourt, Brace and Co., 1927), I, p. 7.

Leo Huberman, in his excellent elementary textbook, *We, the People,* enumerates five divisions in the colonial social ladder. At the top were the royal governors and their officials, the rich merchants, the plantation-holders and the owners of large estates, all of whom helped the colonists to manage their affairs.

> Some of them had come to the colonies with money; some of them had worked hard and risen to the top; some of them were just lucky; some of them were friends of the governor and so got large tracts of land for very little, or even as a favor; at any rate, no matter how they arrived there, they were now the ruling class.

Next were the so-called "yeomen" of the older England. In America they became the hard-working small farmers who formed the largest group in the colonies. Third in order were the free laborers, both skilled and unskilled, including blacksmiths, carpenters, tailors, rope-makers, and so on. Only by saving money and acquiring property were they able to obtain the right of suffrage and to better themselves in general. Fourth, came the indentured servants who usually gave their services for a period of years in return for transportation to America. At the end of their terms they were given a suit of clothes, some seed and perhaps a few tools. Most of this group struck out for the "back country" where land was cheap. And at the bottom of the scale, of course, stood the Negro slaves, whose lot was virtually unchangeable.

THE RISE OF THE "COMMON MAN"

From the time of its founding, America has been the mecca of men seeking opportunity for expression. That expression is to be thought of not only in terms of religion, or politics, or economics, but always, also, in terms of the deep passion of individuals here finding an outlet for personal ambition and energy. Typical of such a "drive" was that which brought thousands of indentured servants to the colonies. Stultified by the pressure of classes in Europe, they sold a portion of their lives, divided their families and suffered the tortures of the damned while crossing the Atlantic in order to find a measure of freedom. Such people, whether voluntarily seeking escape from their underprivileged status, or taking the alternative of exile to prison sentences, or suffering involuntary exile in punishment for some offense, naturally retained small measure of love for the social system under which they had suffered. Indeed, in the majority of cases, resentment against aristocracy burned so intensely within them that they transmitted that feeling to many succeeding generations—in some cases down to the present.

Again, it should be remembered that even those colonists who possessed considerable rank or influence at home and who came to America with a view to making permanent homes looked forward to financial betterment. Gentlemen adventurers of the type of Sir Walter Raleigh and Sir Humphrey Gilbert were few in number; the great majority of those who came had at stake the whole future of themselves and their families. And once arrived in America, all classes faced the inevitably leveling influence of common purposes, common dangers, and common conditions. The last named was particularly potent, and the frontier loomed for two centuries above and beyond all other conditions as a molder of American life and outlook. The frontier immediately measures man in its own terms. The lineage, wealth, and prestige of an aristocrat sink to insignificance in the conquest of a wilderness.

James Truslow Adams, in a chapter entitled "Pulse Beats of Democracy," has suggested periodic recurrences in American life of a type of insurgence. It is the author's thesis that these have occurred regularly at intervals of about thirty years, or one generation apart, from the beginnings of the colonies, and he lists them, first in New England, and later of national import, as follows: (1) The insurgency of Roger Williams, Anne Hutchinson, and others, resulting in their banishment in 1634, (2) the uprising in 1659 following the last executions of the Quakers, (3) the uprising against the Andros regime and the resulting overthrow of the government in 1689, (4) the preaching of John Wise and the flight of Governor Shute, 1714, (5) The "Land Bank" movement, 1730, (6) The Declaration of Independence in 1776, as a culmination of several years' discussion of the rights of man and a prelude to war, (7) "Jefferson's Revolution" in 1801, (8) the election of Jackson in 1828, (9) the advent of Lincoln as President in 1860, (10) the "Populist Revolt" headed by William J. Bryan in 1896.[13]

A notable feature of these "pulse-beats" is the number of them having their origin on the frontier or near-frontier of their time; and in them may be seen repeated expressions of fundamental equalitarianism. The same author has vividly expressed this march toward equalitarianism in his volume, *The Adams Family:*[14]

> "We" is a rare word in the Adams vocabulary. Its absence, for four generations, though apparently trifling, is of no trifling significance. We. The leaders begin to toss it carelessly among the people in this decade. It is proclaimed to the

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[13] J. T. Adams, *The Living Jefferson* (New York: C. Scribner's Sons, 1936), Chap. 15.

[14] J. T. Adams, *The Adams Family* (New York: Literary Guild, 1930), pp. 39-40.

world in 1776. *We.* It rumbles resentfully through every village in 1800. *We.* It rolls from the West like an Indian war whoop behind the lean figure of Jackson 1828. WE. It has become a roar by the fourth generation of Adamses.

Though Jeffersonian democracy did much to eliminate the formalism and ostentation of the Federalists, the real revolution came in 1828 with the elevation of Andrew Jackson, backwoodsman and successful Indian fighter, to the presidency. For the first time the common man was in the saddle, and government posts were held by men, not because of superiority in wealth and social status, but because they came from and were understood by the multitude. The old order was reversed and aristocratic sympathies now became quite as definite a barrier to political preferment as a tendency toward democratic ideas had previously been. It is significant, too, that at this time class distinctions in the matter of dress began to disappear, and before long all men wore the kind of clothing and the short-cropped hair which previously had been the marks of servants and day-laborers. With these changes, likewise, came the advent of free schools throughout the North, and the idea that education must be a class distinction was abandoned for the ideal of equal educational opportunity. Finally, the old aristocracy of the South was displaced through the freeing of the slaves. That aristocracy had defended its position against the Jeffersonians, the Quakers, and the Abolitionists on the grounds, first, that the individual must be subject to the community; second, that more actual condonement than condemnation of slavery can be found in the Scriptures; and third, that the doctrine of the equality of men is fundamentally wrong. The third of these points was brilliantly argued by John C. Calhoun—so well, in fact, that, as T. V. Smith has pointed out, "following the Civil War no American political philosopher of note has defended the theory of human nature and society that he attacked."

However, the cause and the system for which he struggled went down to permanent defeat.

By 1870, therefore, American equalitarianism had perhaps reached its most nearly general triumph. The West was a great economic reservoir; the Homestead Act of 1862 had made public lands available on generous terms, and with this great apparently inexhaustible source of potential wealth—a kind of sanctuary where all might recover from the ills of older economic systems—men felt themselves possessed virtually of a real economic equality of opportunity. Even though the given individual might not choose to recoup his own fortunes by going west, yet this great hinterland was always available for his sons. Abraham Lincoln expressed the general attitude in a speech at New Haven in 1860:

> I take it that it is best to leave each man free to acquire property as fast as he can. Some will get wealthy. I don't believe in a law to prevent a man from getting rich; it would do more harm than good. So while we don't propose any war upon capital, we do wish to allow the humblest man an equal chance to get rich with anybody else.[15]

No citizen, therefore, could be too critical of his present condition in view of the economic possibilities of which he might take advantage, with a sufficient degree of venturing.

Other measures or movements usually cited as indicating the equalitarian principle are: laws against corrupt practices, the direct primary, the initiative and referendum, the popular election of senators, and woman suffrage. Some of these have come about as reactions against those very conditions which in 1870 seemed to offer a golden future to the common man. In the course of two decades it was discovered that these great resources were not inexhaustible, and moreover, that when thrown open without restriction, certain men, either by reason of position, or power, or sheer acquisitive ability, soon far outdistanced all others in their accumulations. A new aristocracy was in the making. Schlesinger has thus described it:

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[15] Quoted by Parrington, *op. cit.,* II, p. 154.

> In the generation following the Civil War, playgrounds of the rich began to appear overnight along the Atlantic seaboard; international marriages became the goal of ambitious mothers; palatial mansions and liveried retinues were recognized as the accustomed symbols of the new superiority. As the first generation grew older and the second generation began to come of age, the new regime began to feel its social position firmly established, its newness worn off; and its efforts at ostentation, though no less carefully sustained, became less frantic. Thus it happened that the second and the third generations were able to found a genuine leisure class with the prodigality and profligacy that attends such a mode of existence. Natural refinements began to grace the life of the "exclusive set"; and with the development of a sense of *richesse oblige,* men of wealth became the patrons of libraries, art galleries, scientific organizations and impoverished colleges.[16]

The "Gilded Age" of the seventies was followed by a period of tremendous industrial expansion, great waves of foreign immigration, the conquest of the frontier, and the dawn of what Mumford calls the neotechnic era, with its shift from steam to electric power. Some of the outcomes making for equalitarianism have been mass production, bringing within reach of the average man and woman everything from rayon silk to automobiles and radios—which, in turn, have exerted powerful standardizing influences; the increase of leisure time, with the attendant rush to every sort of mass entertainment from movies to football; the spread of all kinds of organizations, including Rotary, Kiwanis, the American Legion, and a host of others; the expansion of education in its land-grant colleges, high schools and junior colleges; and the increase of governmental activities intended to benefit directly all manner of age groups, from the very young to the very old, and generally associated with the "New Deal." In the midst of these kinds of movements we now find ourselves, and any interpretation of the national temper and consequent educational outcomes must keep them clearly in view.

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[16] A. M. Schlesinger, *New Viewpoints in American History* (New York: The Macmillan Co., 1922); pp. 95-96.

PHILOSOPHICAL ASPECTS

The concept of equality among men has always engaged thinkers, and they have been quick to mark its philosophic implications. Neither Aristotle nor Plato was an equalitarian, or even a democrat, yet it must be remembered that when the latter drew up a plan for an ideal republic he proposed that those be placed in power who had been purged of all impulse toward self-aggrandizement; their every act was to be construed only in terms of what they conceived as public good.[17]

The Church, as a universal agency, was designed and built as a hierarchy, not a democracy. Augustine's "City of God" was frequently interpreted in terms of the earthly church and in such terms was placed supreme even over kingly domains. That is, the Church early found itself involved in questions of temporal power, and has always exercised a measure of it. Its great thinkers have repeatedly stressed its hierarchical aspects, though, as we have seen, the precepts of its founder made for certain early forms and certain abiding ideals of equalitarianism.

In later Renaissance times one of the most important ideas to receive attention was that of the "natural rights" of man. Its validity was undermined by later anthropological and sociological knowledge, but it exercised great influence upon thinking men for some two hundred years, and took important place in the arguments of defenders of the American Revolution. Its greatest European expounders were Hobbes, Harrington, Locke, and Rousseau.

The first three of these were Englishmen. It is not strange, therefore, that their writings entered influentially into the controversies incident to the establishment of the American Republic. Thomas Hobbes (1588-1679) started with man in his natural state, where all men were essentially equal:

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[17] See Chapter V, p. 130.

> Nature hath made men so equal, in the faculties of body, and mind; as that though there bee found one man sometimes manifestly stronger in body, or of quicker mind than another; yet when all is reckoned together, the difference between man, and man, is not so considerable, as that one man can thereupon claim to himselfe any benefit to which another may not pretend, as well as he. . . .[18]

But Hobbes also carried on the Machiavellian concept of man as essentially selfish; all his actions are to be explained ultimately on the basis of self-interest. Consequently (for men began to aspire to a better form of living than that of mere unorganized savagery), it became necessary that a superior force—the state, or organized government—be established to compel men to relinquish their so-called liberties, or natural rights. Thus there is set up a compact, or contract, between the social group and the government by which the latter, taking over some of the prerogatives of all, governs all for the welfare of each individual. Hobbes, of course, argued for a strong central government, and preferred monarchy above all other forms, though he was willing to concede authority to other governmental agencies actually capable of maintaining order. In American thought of Revolutionary times the doctrine of natural rights was cited again and again, but Hobbes' conclusions became ammunition for Hamilton and the aristocratic group, rather than the equalitarians.

James Harrington (1611-1677) derived his political thinking by observing the city-state of Venice, where he lived for a time, and other European governments, and by much reference to history. His scheme of government, embodied in the book

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[18] Thomas Hobbes, *The Leviathan,* Everyman Edition (New York: E. P. Dutton and Co., no date), p. 63.

Oceana, republican in form, advocated a balance of powers, distributed among a senate from the aristocracy, representing the wisdom of the community, an assembly representing the whole body of people, and an elective magistracy. Harrington believed in a "natural aristocracy"—the phrase discussed in some of the famous correspondence between John Adams and Thomas Jefferson, on the one hand, and between John Adams and John Taylor, on the other hand—but he believed that if the ballot were available to the people, they would select that group as their leaders. That is, he had confidence in democratic majorities; and demanded that not only should laws apply equally to all, but primogeniture should be broken down, vast estates divided up, and income from them limited. The fact of Harrington's influence upon American thinkers is generally accepted. The constitutions of the proprietary colonies of Carolina, New Jersey, and Pennsylvania embodied many of the ideals of the *Oceana,* and either indirectly through these, or directly through Harrington's writings, the leaders of the Revolution and the Constitutional Convention felt the influence of this English thinker. As Russell Smith puts it:

> No one who has studied Harrington's writings can help being struck by the resemblance between the political ideas expressed there and those that have been successfully put into practice in America. Again and again one is tempted to substitute the name America for Oceana and spell his new England with a capital N. The written constitution, the unlimited extension of the elective principle, and the separation of the three functions of government lie at the root of the American political theory. . . .[19]

Thus Harrington was much more democratic than John Milton, who came to have great distrust of the masses and ultimately urged strict government by a caste of the superior-minded; and Harrington was far ahead of his time in urging general education. It is well known that Thomas Jefferson[20] was deeply read in the works of Harrington, and it would thus appear evident that the American was influenced by the earlier thinker not only in governmental theory, but in his attitude toward education.

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[19] Russell Smith, *Harrington and His Oceana* (Cambridge: University Press, 1914), p. 152.

However, the man who undoubtedly affected American Revolutionary and Constitutional thinking more than any other was John Locke. Like Hobbes, he based his arguments upon natural rights, but he conceived of man in a state of nature as good, not bad, and, significantly, this law of natural living was a product of reason. Therefore, all men in this state were equal; reason would never justify inequalities. And the rights of man, in such a state, would include the individual's right to live without interference from his fellow man, his liberty, when liberty means recognition of interdependence in the social group, and his right to property. This was, manifestly, a different attitude from that of Hobbes, yet Locke did not idealize the natural state in the manner of Rousseau. In insisting upon the individual's right to property, Locke made himself the prophet of the English middle classes. He espoused the cause of the English Puritans as against the Cavaliers, and in his treatment of the "social contract" opposed the doctrine of divine right in favor of constitutional government and the will of the majority.

And here we see entering Western European thought that intellectual justification—as Richard Baxter furnished the ecclesiastical sanction among the Kidderminster weavers during the same century—for *bourgeois* thrift and accumulation. Thus out of the struggle for political freedom from aristocratic domination came those processes of reasoning and theological justification for a mode of economic life that would foster capitalism and a new basis of social gradation. However, Locke was not in any sense an extremist. Indeed, the elements of his thinking with regard to government, education and psychology which appealed most widely were those characterized by thoroughgoing English common-sense and moderation. Yet, when the American colonists sought justification for their revolt against the mother country, they turned to Locke with his doctrine of the necessity of the consent of the governed and his contention that property owners could not be compelled to pay taxes without representation. Moreover, out of Locke's psychology was to emerge an extreme theory of equalitarianism which continues even today to affect education profoundly. This was the famous doctrine of *tabula rasa.*

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[20] Thomas Jefferson's copy of *Oceana* is still preserved in the Library of Congress.

In his philosophy of mind Locke[21] was likewise trying to find a *via media* in his own time. He insisted on the primacy of sensations in the mental life and the building up of ideas through association. That is, the mind at beginning is to be regarded as a "white paper, void of all characters, without any ideas," and the terms written upon this paper are solely in terms of "experience."

Some of the implications of the doctrine with respect to the importance of environment were seized upon by Locke's followers, most notably by the Englishman, Hartley, and the Frenchman, Helvetius. Witness Hartley's statement, written in 1749:

> If Beings of the same nature, but whose affections and passions, are, at present, in different proportions to each other, be exposed for an indefinite time to the same impressions and associations, all their particular differences, will, at last, be overruled, and they will become perfectly similar, or even equal. They may also be made perfectly similar, in a finite time, by a proper adjustment of the impressions and associations.[22]

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[21] See Chapter IV, p. 108.

[22] David Hartley, *Observations on Man,* Prop. XIV, Cor. VI.

Obviously this "proper adjustment" was to be effected through education and other processes of social amelioration. Once the promise of *tabula rasa* is accepted, the total responsibility for the outcome of every individual life rests in the social environment. The equalitarian implications of the doctrine have been admirably summed up by Randall:

> Since all that men are comes from experience, all present differences and inequalities must be due to differences in environment, and men must *at birth* be exactly equal. Such was the corollary that men drew from Locke's sensationalism, the necessary foundation for the democratic faith that men are born equal and that education alone is needed to perfect human life and to bring into being the ideal democratic society. No wonder that the men of the eighteenth century were intensely hopeful of the future: all that is bad is due to a faulty education and a faulty social environment. Once change these, and there is no limit to the possibilities of human nature. Fourier was only expressing the universal optimism in an extreme form when he looked forward to seeing, with proper changes in social organization, a French nation of thirty million scientists as great as Newton and thirty million poets as great as Shakespeare![23]

One's mind is immediately projected to the first quarter of the twentieth century and to a statement by the psychologist, J. B. Watson, that he could take any normal child, and make of him any kind of "specialist" you might choose, with the provision that he should have full control of the child's environment. It would be very unfair to judge behavioristic psychology by this one assertion of its most famous advocate, but its relation to the environmentalism of the earlier psychologists is obvious. Moreover, the appearance of this psychologist's claims evoked a response strikingly similar to that which met the visions of earlier thinkers. Professor Woodworth[24] has reproduced two quotations from New York newspapers upon the appearance of Watson's *Behaviorism.* Of it the *New York Times* said: "It marks an epoch in the intellectual history of man"; while the *Tribune* waxed still more eloquent: "Perhaps this is the most important book ever written. One stands for an instant blinded by a great hope."

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[23] John H. Randall, Jr., *The Making of the Modern Mind* (Boston, New York: Houghton, Mifflin Co., 1926), p. 315.

[24] R. S. Woodworth, *Contemporary Schools of Psychology* (New York: The Ronald Press Co., 1931), p. 92.

One of the patent reasons, however, that Watson's doctrine did not stir more general enthusiasm, was the previous development of the doctrine of evolution and studies such as *Hereditary Genius* by Francis Galton, cousin of Charles Darwin. So exhaustive were Galton's investigations and so emphatic was his opposition to the older philosophies that the repercussions of his work are readily discernible today. Said he:

> I have no patience with the hypothesis occasionally expressed and often implied, especially in tales written to teach children to be good, that babies are born pretty much alike, and that the sole agencies in creating differences between boy and boy, and man and man, are steady application and moral effort. It is in the most unqualified manner that I object to pretensions of natural equality.[25]

Galton's definition of outstanding ability includes three traits—intellectual capacity, eagerness to work, or "zeal" (today we should probably call it "drive" or "interest"), and power of application. It was his contention that men of outstanding eminence possess these characteristics, and that

> if the "eminent" men of any period had been changelings when babies, a very fair proportion of those who survived and retained their health up to fifty years of age, would, notwithstanding their altered circumstances, have equally risen to eminence.[26]

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[25] Francis Galton, *Hereditary Genius* (London: Macmillan and Co., Ltd., 1923), p. 12.

[26] *Ibid.,* p. 42.

Modern American scientists whose work closely parallels that of Galton are J. McKeen Cattell, who studied the lives of American men of science, and Lewis M. Terman, who has done notable work in the measurement of mental abilities, and has edited and collaborated in a two-volume work, *Genetic Studies of Genius.* This includes a study of more than one thousand living children of superior abilities and a study of the lives and abilities of three hundred great men of the past. In this investigation, for instance, Terman found that the number of families with two superior children—as given by the instruments of measurement he used—was more than twelve hundred times the number chance would give. He found, also, without complete tracing of genealogies, that nearly a quarter of the members of the ''Hall of Fame'' were related to one or more of these children.

Terman's introduction to this work has significance in relation to the topic here under consideration. He declares:

> It should go without saying that a nation's resources of intellectual talent are among the most precious it will ever have. The origin of genius, the natural laws of its development, and the environmental influences by which it may be affected for good or ill are scientific problems of almost unequalled importance for human welfare.

Three superstitions, he continues, have prevented research in the field; namely, (1) the idea that the ''great man'' is somehow qualitatively set apart from other men, (2) the notion that intellectual precocity is pathological, and (3) the growth of democratic sentiment in Europe and America during the last few centuries, ''which has necessarily tended to encourage an attitude unfavorable to a just appreciation of native individual differences in human endowment.''

Yet no matter how earnestly certain of our thinkers may attest the importance of intellectual talent and the critical mind, we know that much of the reaction of the American public to social questions is not cast in the mold of critical-mindedness. Tradition, and even literature and philosophy, will verify this point. It is necessary, therefore, in any treatment of American ideas of equalitarianism to give some attention to the influence of Rousseau.

Jean Jacques Rousseau (1712-1778) moved men tremendously, not by way of cold logic but by passionate idealistic appeal. Morally irregular, indifferent to the fate of his own children, unable to live peaceably with others because of his vanity and irritability, he inveighed, in a fashion that stirred men throughout Europe, against the injustices amid which he lived. In his *Discourse on the Origin and the Bases of Inequality among Men,* Rousseau argued that civilization and all its institutions were the result of the degradation of man from an ideal and idyllic state when he lived primitively—that is, in the state of the ''natural man.'' Men were ''free, healthy, good and happy'' so long as they were content to apply themselves to simple, individual tasks. But as soon as one man had to call for the help of another, and perceived it was advantageous ''for one person to have provisions for two,'' equality disappeared. Then property was introduced, labor became essential, and forests were changed into fields ''in which slavery and wretchedness were soon seen springing up and growing ripe with the harvests.''[27] Rousseau was the defender of the downtrodden, and he expatiated upon the virtues of the common man. ''Before one who reflects,'' he declared, ''all civil distinctions disappear;'' the same passions and feelings are present in the clown as in the man of note, the reflective person ''only distinguishes their language, and a varnish more or less elaborately laid on.''

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[27] It is true, of course, as a number of writers have pointed out, that Rousseau in other passages concedes the necessity of institutional life, and argues for reform in thoroughly contemporary terms. Whether this is to be attributed to inconsistency or to "profound insight," as Bosanquet phrases it, depends a good deal upon the approach of the critic. We must not forget, however, that Rousseau advocated education as a state function and that in the *Contrat Social* he declares his aim to be: "To find a form of association which shall defend and protect, with the entire common force, the person and the goods of each associate, and by which each, uniting himself to all, may nevertheless obey only himself, and remain as free as before." Quoted by Bernard Bosanquet, *The Philosophical Theory of the State* (London: Macmillan and Co., 1925), p. 83.

Rousseau was an equalitarian (at least theoretically), a humanitarian, a pacifist, an idealistic reformer. He set out from a rationalistic basis with the Encyclopedists, but he soon parted company with them and developed his power through appeal to the masses of men. We shall have occasion to study his work further in connection with succeeding chapters.

The American whose work and manner of appeal corresponded most closely to those of Rousseau was Tom Paine, who came to this country from England in 1774, at the age of thirty-seven. While he did not go to France until some time after this, he absorbed ideas—including Rousseau's—as Parrington says, like a sponge, and, writing with all the fervor of a demagogue, shaped them in such fashion that they became the topic of the common man's conversation throughout the colonies. He reaffirmed the doctrine of natural rights, and in his outcry against the tyranny of England showed, of course, a violent antipathy toward aristocracy. The weight of Paine's thinking was thrown in the scale on the side of Jefferson and of that movement which has made availability of public land to the common man so large a factor in American history, and its outcomes for equalitarianism so significant.

THE NINETEENTH CENTURY

Out of the social turmoil of the early part of the nineteenth century came many visionary schemes of reform, including an incredibly large number of attempts at communism. Some of the better known in America were the Oneida, the Yellow Springs, and the Brook Farm Communities. Men like George Rapp, John Humphrey Rogers, and Bronson Alcott were not deep thinkers, yet they were the forerunners or contemporaries of others who spoke more comprehensively or significantly. One was Ralph Waldo Emerson, whose equalitarianism was of an abstract nature, a corollary rather than a direct preachment. Some of the Brook Farm enthusiasts were his own neighbors, but his Yankee common sense was never caught off guard; he remained cold and a bit amused by it. With respect to slavery his principles would permit him to take only one position, of course. He spoke forthrightly at times, yet he never threw himself body and soul into the movement for abolition. Similarly, he struck out at the money-changers of Boston. But these points of view all branched from his central idealism; and the loftiness of that aspiration controlled his approach to all controversies.

One of Emerson's literary successors, however, was a man who definitely spoke for the masses. It is true he found his way to utterance by way of feeling, not reasoning, and even his prose work could not be regarded as philosophic; yet no one could well deny him a place as a true American voice. This man was Walt Whitman.

Whitman has been called the American Rabelais. There is something titanic and all-embracing about him, and withal a first-hand pagan sensuousness and capacity for feeling that remind one of figures of the Renaissance. Yet he had also a dash of transcendentalism, and, like Emerson, could lash out at those who, he felt, were desecrating the high potentialities of American destiny. Whitman believed passionately and rather uncritically in the glorious America to be. To him national growth was a great onward surge of the masses toward a fine and complete democracy. He was an Abolitionist, a Free-Soiler, in many ways an outspoken radical, but his radicalism was that of the believer in the rights of the common man with an eye to the America of the future. He regarded himself as the embodiment of the many who strove. ''I am large—I contain multitudes,'' he once said. He knew crowds of workmen, and he knew unfortunates of all kinds. When he visited ''the Tombs'' with young Moncure Conway, ''the inmates crowded around him, as to a father confessor, unburdening their various complaints.'' In many ways Whitman was crude and childish, but these very characteristics gave him deeper insight into the lives of the great group for whom he spoke. He espoused no particular doctrine of levelism; to him, as to Emerson, it was something assumed; but the basis of that assumption was quite different from that of the New Englander. Whitman was so completely one of the people, his work was so entirely a reflection of human striving and feeling as he saw it that he could not think of himself as apart from them.

Both Emerson and Whitman accepted the doctrine of evolution gladly. To the latter, who obtained it by way of Spencer, it meant scientific confirmation of his own vision of the onward human march toward triumph. But with evolution's emphasis upon heritage, and with increased psychological and anthropological knowledge nineteenth century thought veered away from the older literal forms of equalitarianism. According to T. V. Smith:

> The persisting claim of human equality, general and factual, simmered itself down in America during the nineteenth century to three major claims, each more or less specific: (1) all men ought to be equal before the law, (2) all men ought to have equal access to the suffrage, and (3) all men ought to have equality of opportunity.[28]

Actually the average American man or woman has greater religious freedom, greater political privilege, freer access to social prestige by way of education than any such average citizen of the past. Moreover, there is no doubt (unless the whole Western basis of civilization is to be upset) that he will attain, within the next few decades, a much more equitable distribution of economic income. Yet actual and complete equalitarianism will not have been attained; men and women will continue to have different capacities or tendencies and to develop different tastes and talents.

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[28] T. V. Smith, *The American Philosophy of Equality* (Chicago: University of Chicago Press, 1927), p. 142.

Professor Smith has elaborated what he calls "the functional interpretation of equality." This he ties up with a naturalistic interpretation of the human "soul"; but he is willing, along with William James, to admit that "one cannot afford to despise . . . great traditional objects of belief." Therefore, however great may be the evidence against men's actual equality, a sweeping denial of it would probably do more harm than good. It is "functionally useful without being statically true." But such a functional point of view means a forward rather than a backward look; "what one is can better be determined by what he is *becoming* than by what he *has been,*" and it makes for a better basis of cooperation. "Indeed in so far as inequality is confessed and paraded, cooperative activity is certainly inhibited."[29] Human progress, says Smith, is dependent upon cooperation; therefore, that point of view in society which works for cooperation may mean social salvation.[30]

The profound implications of the problem of equalitarianism for American education are obvious. Education is, and must be, concerned with the interaction of individual and society. It must face the question, therefore, as to how unique individuals are to be trained to live in a democratic society. Many phases of the future of American life depend upon the answer to this question.

Reading List

Adams, J. T. *The Living Jefferson* (New York: Scribner's, 1936). Chapter 15.

Ernst, James E. *Roger Williams, New England Firebrand* (New York: Macmillan, 1932). Chapter 10.

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[29] *Ibid,* p. 216.

[30] For further development of this point see: Carl Friedrich, "Belief in the Common Man," *American Scholar,* IX, 3 (Summer, 1940).

Gooch and Laski. *English Democratic Ideas in the XVII Century* (Cambridge: The University Press, 1927). Chapters 3 and 5.

Parrington, V. L. *Main Currents in American Thought* (New York: Harcourt, Brace, 1927). Vol. I. Chapters 1-4.

Schlesinger, A. M. *New Viewpoints in American History* (New York: Macmillan, 1922). Chapter 4.

Smith, T. V. *The American Philosophy of Equality* (Chicago: University of Chicago Press, 1927). Chapters 1 and 6.

XI. HUMANISM AND HUMANITARIANISM

HUMAN beings are gregarious; they live in groups. The phenomena of civilization are the result of this kind of living. In the political, religious, economic and sociological thinking of the past two hundred years there has been a growing consciousness that one man's acts, however humble the man, affect other men's lives.[1] This is an inevitable accompaniment of such movements as capitalism, democracy, industrialism, science, applied science, and the consequent eclipse of the idea of salvation in the medieval sense. The concept of humanity takes on new dignity; men have even proposed to elevate it to the status of a ''Great Being'' with various religious connotations and two derivatives with particular significance for education—*humanism* and *humanitarianism*—are commonplace in present-day vocabularies. Nevertheless, there is abundant confusion in their use.

Both words have been used to define certain altruistic concepts developed in the new social *milieu. Altruism,* a word coined by August Comte, means ''regard for and devotion to the interests of others.'' It connotes dealing with masses, with societies, with races; and as originally used, implied dependence upon science, not Christian teaching or metaphysics. And here one point requires emphasis. This whole modern social atmosphere is inextricably associated with ideas of progress which involve the scientific conquest of nature and the amelioration of man's lot through the advances of science. The vision of these possibilities was described and first sketched for modern man by Francis Bacon, but it has been part of the creed of all applied science and social science since that time.

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[1] See Chapter III, p. 81.

The word *humanism* in the scientific or naturalistic sense was launched by F. C. S. Schiller in his elaborate defense of the pragmatic approach to thinking in 1906, declaring: "It is merely the perception that the philosophic problem concerns human beings striving to comprehend a world of human experience by the resources of human minds," and such thinking can be traced back to Protagoras, who maintained that man is the measure of all things.[2]

John Dewey has accepted and defended this meaning of the word, and like Comte, has offered a religious interpretation of its objectives, devoid however of any element of theism. In a series of lectures entitled *A Common Faith,* he argues that there can be only one method for ascertaining the truth—"that conveyed by the word 'scientific' in its most general and generous sense"—and defines religious faith as

> the unification of the self through allegiance to inclusive ideal ends, which imagination presents to us and to which the human will responds as worthy of controlling our desires and choices.[3]

As opposed to, and indeed often antagonistic toward, scientific humanism[4] is the more commonly known and accepted variety which we shall call literary humanism. First, it should be noted that this kind of humanism is not altruistic except in one direction—namely, education. It emphasizes the Greek outlook upon life accentuating the importance of the reason, the intellectual nature of the good, the dualism of good and evil, and the principle of proportion, or balance, in all ethical and epistemological problems. Therefore it insists, with Plato, upon a stable and actual body of truth, and regards that as most humane which has proved of enduring value to the human race. This variety of humanism is a more or less direct derivative of that of the Renaissance, growing out of the rediscovery of the classics, though its American protagonists, even if members of the same general group, are by no means agreed among themselves. However, what has probably been the most nearly concerted movement of recent years has been that developed among a group of American literary critics. The attitude that it represents is widespread, particularly in the educational world, and has lately aroused fresh interest through its indirect espousal by President Robert M. Hutchins of the University of Chicago.

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[2] The complete sentence, as usually given: "Man is the measure of all things—of what is, that it is, and of what is not, that it is not."

[3] John Dewey, *A Common Faith* (New Haven: Yale University Press, 1934), p. 33.

[4] Exception must be made in the case of such writers as George Sarton, Everett Dean Martin, and George Santayana.

One of the first sources of confusion in any treatment of our subject is the fact that the scientific humanism previously discussed is sometimes called humanitarianism. Thus this scientific school of thought may be called humanism (as by F. C. S. Schiller), humanitarianism (as by Irving Babbitt), or, as preferred in this volume, pragmatism or instrumentalism. By humanitarianism, as used in this chapter, is meant the emotional approach to altruism. The three trains of thought, then, may be enumerated as:

1. Humanism—literary, intellectual, individualistic, stressing dualism and the Golden Mean. (Man is important because of his sense of values.)
2. Humanitarianism—sentimental, uncritical, altruistic, stressing fellowship and good-will. (Man is important because of his innate goodness.)
3. Pragmatism—scientific, naturalistic, altruistic, stressing social progress through intelligence and science. (Man is supreme because of his intelligence.)

Our present concern is with the two first named, as here defined. But it becomes immediately obvious that humanitarianism offers more difficulty of treatment, because it constitutes no distinct school. It may be characterized as an attitude varying in the definitions of common parlance all the way from sympathy for a lame animal to world-wide response to a national disaster. As here used it implies an excess of sensibility or feeling, and reliance upon that kind of prompting in dealing with other men. The exact point at which this ''excess'' is reached would often be difficult or impossible of definition; for the line between what may be called legitimate as opposed to degenerate humanitarianism is not always easily distinguished. Again, sentiment, when accompanied by other mental attitudes, may be adjudged as within the bounds of propriety, when alone it would not. A liberal admixture of realism, of science, of practicality, of humor, or of loyalty to high principle will go far toward maintaining balance. The humanists like Irving Babbitt do not object to the humanitarian impulse as something ancillary to profound spiritual realities (and they would designate these as the intellectual life and the religious life—the latter with its complement of mysticism), but when it essays to become a movement in its own right, then, say these critics, humanitarianism becomes superficial and misleading. As literary critics they accept all expressions of great and true feeling, but they have a corresponding abhorrence of feeling with a false note.

CONTRASTS BETWEEN THE TWO POSITIONS

It is understood, of course, that any definition of the positions of humanism and humanitarianism, in view of the confusion prevailing on both sides, is sure to be unsatisfactory to certain sticklers for particular and restricted uses of the terms; nevertheless, they have sufficient significance in American educational thought to warrant an attempt at broad contrast. Following are some of these important differences as here conceived.

First, humanism stresses the attainment of *excellence;* humanitarianism emphasizes the rendering of *service.* The two goals are reached or are recognized by different processes; one obviously is *qualitative,* the other *quantitative;* and they imply thoroughly different ''mind-sets.'' Mr. B. writes a play attacking an evil situation and having a profound effect. Your humanist will be moved to admiration if the play is really well written according to pretty generally accepted standards, if it contains evidence of genuine thought and moves with clarity and precision. Your humanitarian, on the other hand, will be most deeply concerned with its emotional appeal, and the number of people it affects ''beneficially.''

The excellence sought by humanism is an *individually intellectual* thing; the service of humanitarianism is necessarily something *social.* The course of humanism is guided by *reason;* that of humanitarianism, by *sentiment.* This does not mean that humanism is all cold logic, nor that humanitarianism is comprised of no more than gushing brotherly love; it does mean that problems will be adjudicated finally by way of these two opposed approaches. Once more, humanism is *critical,* while humanitarianism is *uncritical.* The distinction is not altogether an indication of shortcomings on the part of humanitarianism; rather it points out that, by the very nature of the humanitarian outlook, discrepancies, faults, and failures *should* be overlooked, or at least dealt with very sympathetically; while humanism regards the excellence for which it searches of sufficient importance to overshadow uncritical sympathy. As a result, humanism will be *aristocratic;* humanitarianism, *democratic.* The term aristocratic as used here is not limited, of course, to the narrow social or political meaning. Humanism will be interested in intellectual or spiritual or artistic excellence anywhere, no matter what its origins. But inevitably such an interest concentrates upon the few. By the laws of nature, outstanding excellence in these directions cannot be possessed by the many; it is exceptional. Consequently, the humanist may be aristocratic, also, in the commoner sense, for he regards refined social intercourse and fine manners much more highly than conduct that is either mediocre or in any degree lacking in taste. Interest in the formulation of intellectual standards and the bases of judgment, however, calls for a measure of *detachment,* and of this the average humanitarian has small store. He is immersed in *activity,* in "works," and in them he is pretty apt to be the opportunist, swayed by the feelings of the moment.

A further outcome of these attitudes will be an interest in *stability* on the part of the humanist, with equal emphasis by the humanitarian upon *progress,* while this division, in turn, leads to quite understandable consequences in the humanist's concern with the *past* as contrasted with almost total immersion of the humanitarian in the *present.* Values and standards are matters of experience. The humanist insists these these can be derived only from long and collective human trial and judgment; and that no present value can prove itself in any ultimate sense without the passage of time. The humanist is definitely inclined toward traditionalism; he is always pointing to historical or classical examples, and this again brings down upon his head the scorn or even the malediction of the humanitarian. Another related outcome will be the humanistic emphasis upon *deliberation* as opposed to the humanitarian approval of *spontaneity.* The humanist looks with distrust upon that which has not been given the benefit of careful appraisal; while the humanitarian prizes the freshness and vigor of ideas and motives that spring up spontaneously. Finally, the keystone of the arch of living for the humanist is *balance* or proportion; while the humanitarian is apt to measure the success of living by its *fervor.* The latter stresses enthusiasm, zeal, or warmth. To him the insistence of the humanist upon temperance in all things smacks not only of prudery, but of incapacity for life and for fine, stirring deeds by which humanity is to ''make progress.'' Many a social worker, many a club-woman, many a business man—as well as the W. C. T. U. or the Y. M. C. A. member—thinks in terms of such an emotional drive. But this same fervor to the humanist means, too often, a species of sentimentalism, deficiency in poise or judgment, and lack of that deliberate approach to problems and values which he associates with maturity and wisdom. The humanistic and the humanitarian points of view are sufficiently positive and sufficiently divergent to make for considerable irritation when concerned with a common objective, such as education.

HUMANISM AND HUMANITARIANISM AS ANCIENT DOCTRINES

Obviously, humanitarianism is closely related to the missionary type of religion. It is to be expected, therefore, that Confucianism—which was formulated not as a religion but as a system of morals—should be regarded as more humanistic, and Buddhism as more humanitarian. Confucius has been called the Aristotle of the East. He distrusted feeling as a guide. ''The superior man,'' he said, ''is dignified.'' And this dignity implies self-knowledge. ''What the superior man seeks is in himself; what the small man seeks is in others.'' The conservatism of Confucius' thinking commended itself to successive dynasties and affected the outlook of the whole Chinese world of learning. But conservatism was not his only humanistic trait. ''Man is greater than any system of thought,'' he declared, and Confucius thus made man rather than God the center of his system. Again, he deplored ''learning, undigested by thought,'' while pointing out the peril of ''thought unassisted by learning.'' After this manner, both directly and by implication the great Chinese teacher laid down, even before the time of Aristotle, doctrines that have a familiar ring to Western ears.

Buddhism occupies a kind of middle ground. It definitely urges against ''pagan'' sensuality on the one side and against asceticism on the other. It names the ''Middle Way'' as the way of living, and its doctrine is much more logically arranged and expounded than Christian doctrine. On the other hand, love and joy are central points in all questions of right conduct, and here, as well as in its mysticism that lifts the worshipper to heights of ecstasy, it departs from the discipline and the method of intellect.

It is in the great figure of Aristotle, however, that humanism finds its most powerful early Western advocate. Aristotle was famous for the sanity of his outlook. He frequently used a Greek work, *aretè,* usually translated as *virtue* or *excellence,* but Everett Dean Martin suggests that it be rendered *the art of living.* From the time of the Seven Sages, in very early Greek times, the middle way or golden mean had been advocated. It may be regarded as a rather flowery phrase for our word *temperance,* perhaps; but it has greater significance. The golden mean of conduct implies more than the governance of appetites; it avoids extremes of action in any situation, and this severe control is a carefully reasoned process. For example, one may be overbold, and we call him rash; he may be too fearful, and we call him cowardly; the really self-contained man has courage. Similarly, between stinginess and extravagance there is a mean, or middle state we may call liberality; between slothfulness and greed, ambition; between humility and pride, modesty; between complaisance and flattery, friendliness. Obviously this kind of thing is difficult of attainment in specific instances and about the best we can hope for is a good ''average.''

> It is not easy, for instance, to determine exactly in what manner, with what persons, for what causes, and for what length of time, one ought to feel anger: for we ourselves sometimes praise those who are defective in this feeling, and we call them meek; at another, we term the hot-tempered manly and spirited. . . .

> At all events, this much is plain, that the mean state is in all things praiseworthy, and that practically we must deflect sometimes towards excess, sometimes toward defect, because this will be the easiest method of hitting on the mean, that is, on what is right.[5]

The great thinker was thoroughly consistent in his approach to the problem of living. The highest and most durable satisfactions are to be found, he felt, in the intellectual life. Anything that contributes to that life is to be fostered; anything that hinders it, condemned. He has been called ''moderate to excess.''

Among the Romans, Cicero, Virgil, and Horace have all been called humanists. All sought happiness through excellence, though not with quite the same emphases as those of Aristotle. The work of Cicero was especially influential because of his position as a relayer of Greek classics. In the enthusiasm of the rediscovery of those old writings during the fourteenth and fifteenth centuries men found in Cicero not only a Latin gateway to the Greek, but also a stylist whose taste, simplicity, and poise in handling his own language established him as a model to follow—in some cases even slavishly—for two hundred years. Moreover, Cicero gave utterance to much good humanism on his own account. He died a few years before the founding of the Christian religion, and with the advent of this movement it is not too much to say humanitarianism, in its commonly accepted sense, received for Western minds its initial and its greatest impetus.

HUMANITARIANISM AND CHRISTIANITY

Paul Elmer More distinguishes between social virtues from a religious standpoint and from an ethical point of view. There are, he argues, four fundamental Christian social virtues: namely, humility, non-resistance, poverty, and chastity, and proceeds to show that if carried out conscientiously, they would not only destroy the social fabric, but if the last named were made operative, would destroy humanity altogether. Therefore, the four ethical virtues commonly accepted in the social world—justice, mercy, charity, and temperance—are those by which society must govern itself in a practical way, and leave the religious virtues in the category of ideals, or to the pursuit of the select few who aspire to the mystic joys of complete self-renunciation. More thus makes a place for competition, for "great men," and for material rewards; and he deplores the introduction of the idea of humanity as a whole into this second order. Humanitarianism fails, he declares, to distinguish between "the ideals of religion and the ideals of the world," and this makes for confusion in both religion and the social order. We are not concerned here with the correctness of More's analysis, but we know the Western World in its modern interpretation of Christianity does not consciously make the distinction he demands. The second great commandment proclaims that "thou shalt love thy neighbor as thyself." Any contention that this was intended only for religious mystics would meet with indignant denial from large groups of Christians.

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[5] Aristotle, *Nichomachean Ethics,* tr. by D. P. Chase, Everyman Edition (New York: E. P. Dutton and Co., 1915), p. 43.

Probably the most literal living of the ideals of poverty, humility, non-resistance, and chastity during the Middle Ages was exemplified by Francis of Assisi, who as a layman spent his life in service to the poor, the lepers, and other sufferers of his time. The order which he established—the Franciscans—became known the world over, not for theologies and disquisitions, but for service to humanity. But in this connection again it should be remembered that Saint Francis was a thoroughgoing mystic and ascetic. His conversion was accompanied by, or took the form of, a trance; and visions and mystic transports were common throughout his life. Thus, like the original founder of Christianity, Francis of Assisi found his motivation, not in humanity itself, but in a religion that expressed itself *through* ministrations to humanity.

There is a sense in which Saint Francis may be regarded as a precursor of the Renaissance. First, he embodied an insistent probing of life at first hand that led to his devotion to poverty and service among the poor; and second, he turned from the ways of his own time back to what he believed—and what the Church believed—to be the source of all right living; namely, the life of Christ. But his interpretation was vitally different from that of the churchmen of his time. He deposed symbolism and liturgy in order to make an application of Christianity in terms of this life. Inevitably, in the true Franciscan program, life must be faced as it is found, and the realistic alleviation of suffering involves a surrender of complete other-worldliness.

HUMANISM AND THE RENAISSANCE

It is within the connotations of the phrase, Revival of Learning, that the word *humanism,* as most commonly used and understood, has its place. The Renaissance was in many ways a reaction against scholasticism—the medieval approach to theological truth by application of dialectical methods. In this long medieval period of several hundred years church officials directed thought of a philosophic nature into currents deriving entirely from certain theological premises. That is, church dogma had a fixed and unshaken position; all thinking started from these dogmas and under no circumstances essayed any kind of exploration back of them. The result, of course, was fixation, and inasmuch as these doctrines conceived earthly life purely in terms of preparation for another world, the whole atmosphere of the times was charged with renunciation of present values and concentration upon the means of salvation.

Gradually, conditions changed to bring about a new spirit. With the Christianizing and assimilation of the Teutonic tribes the confusion consequent upon the dissolution of the ancient Roman empire subsided. A degree of comfort succeeded the previously rough and precarious living that prevailed under a constant threat of invasion by barbarian hordes. On the other hand, the ideas of unity incorporated in the Holy Roman Empire and the Roman Church lost power to such an extent that the way was left open for the introduction of new theories—including those dealing with church and state—that would have seemed impious to preceding generations.

Many of the ancient classics had been preserved in the old monasteries.

> The Middle Ages were certainly far from ignorant or contemptuous of the Ancients. Many of the Fathers of the Church . . . had a good grounding in Greek. St. Ambrose set the Pandects[6] beside the Gospel and Cicero beside St. Paul. Gregory the Great held the study of ancient philosophy and literature to be of great value for the understanding of the Scriptures. Plato's *Phaedo* had been translated into Latin in the thirteenth century. . . . From the tenth century onwards the convent of Bobbio prided itself on its Greek and Latin manuscripts. The monks plumed themselves on possessing Demosthenes and Aristotle, but they had also most of the Latin poets and even the grammarians. . . .[7]

It is interesting in this connection to observe that the three great humanists of the Renaissance, Petrarch, Ficino, and Erasmus—all belonging to this cult devoted to pagan antiquity—were churchmen.

For men beginning to chafe under the cramping orthodoxy of scholasticism, the spread of this enthusiasm for the classics opened up a world of human pain and pleasure strangely akin to their own inner life. Moreover, it gave them confidence in the fundamental rightfulness of their own aspirations, and held up masterpieces of art, literature, and philosophy for emulation. Thus humanism, as J. A. Symonds has defined it,

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[6] Extracts from the work of thirty-nine ancient jurists, published in 533, in fifty books.

[7] F. Funck-Brentano, *The Renaissance* (New York: The Macmillan Co., 1936), pp. 65-66.

> denotes a specific bias which the forces liberated in the Renaissance took from contact with the ancient world. . . . It indicates the endeavor of man to reconstitute himself as a free being, not as the thrall of theological despotism.[9]

Therefore, in order to find vitality of expression it became necessary to seek old treasures of art and literature, and the enthusiasm that directed some of these searches and followed some discoveries is well-nigh unbelievable.

> The Apollo Belvedere was discovered in 1450 on an estate of Cardinal della Rovere. The Laocoon group mentioned by Pliny was brought to light in a Roman estate near Sta. Maria Maggiore. Michael Angelo himself had directed the excavations. It would be no exaggeration to say that it was the most sensational event of the time. The group was first of all drawn to the capitol on a triumphal car and thence to the Belvedere, where Bramante, at the Pope's expense, had prepared a fitting site for it. On its passage through the streets houses were beflagged and garlanded as for a triumph. Church bells pealed, the cannon of the castle of St. Angelo thundered salutes. When it reached its destined place, the marble was hidden by the flowers thrown by frenzied admirers. No victorious general of Rome could have had a more splendid triumph.[9]

But fervor and vitality marked the Renaissance movement throughout. Explorations in the New World, the importation of gold and silver, the opening up of mines, and the tremendous stimulation of trade undermined the old feudal order and set in motion those forces that were to result in modern capitalism. Great banking families, like the Fuggers and the Medici, grew up. Many among the beneficiaries of the changed order might be called the "newly rich," but

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[8] See his article on the Renaissance, *Encyclopedia Britannica,* Eleventh Edition.

[9] F. Funck-Brentano, *op cit.,* p. 77.

the gulf between upper and lower classes was, to begin with, widened, not narrowed. Among these upper classes everything common was scorned, the language of the people despised, and the use of Latin regarded as a primary requisite. Even Erasmus, broadest-minded of all the humanists, declared that a good prince should admire nothing extolled by the mob, and that he should not heed the opinions of the "common herd."

The humanistic attitude toward the vulgar tongue was exemplified in Petrarch's disdain for his own early *Canzoniere,* upon which his true fame as a poet rests today, but which he regarded as the expression of youthful folly and hoped would remain forever unknown to others. Petrarch has been credited with founding humanism and inaugurating the Renaissance in Italy. He was a scholar throughout his life, employing several secretaries up to the time of his death and studying unremittingly. He traveled all over Italy, then into France, Spain, Germany, and even to Greece in search of ancient manuscripts, discovering Cicero's *Familiar Letters* at Verona in 1345, and bringing to light, also, the *Institutions* of Quintilian. Despite his inconsistencies of character, his ideal remained always literary; and he must be regarded as artist rather than as moralist, profound thinker, or man of action. His ideal of humanism, in its insistence upon self-culture, freedom of expression, and liberal individuality forecast many of the praiseworthy outcomes of the movement. In his Latin works, however, which he regarded so highly, he fell far short of the excellence to be attained two hundred years later by the man who brought humanism to its climax, Desiderius Erasmus.

HUMANISM NORTH OF THE ALPS

Transalpine humanists generally resembled the Italians in their disregard for the common people, their tendency to live the life of wanderers, and to seek the support of patrons by way of flattering dedicatory prefaces. Exception would have to be made in the cases of John Colet and Thomas More, because both possessed incomes of their own. Erasmus, writing of the latter, said, ''In More's house you would see that Plato's Academy was revived again,'' and of the great humanist divine, ''When I hear my Colet I seem to be listening to Plato himself.'' It is not strange that Erasmus accounted his English experiences among the most delightful of his life.

Desiderius Erasmus (1469-1536) is usually regarded as representing the apotheosis of humanism. ''For a period of about twenty years [he] was the prince of the humanists and the intellectual king of Europe.'' As a young man he took the monastic vows, but later obtained from the Pope a dispensation absolving him from them. Erasmus very early became attracted to humanism, and was unwilling to remain even at Oxford, because when he first visited England, Greek could not be studied there. He pursued his study of it at Paris. The Latin of Erasmus was not pure in the classical sense, but it was ''a living and spoken tongue.'' He talked the language himself, and his written page evinces the spontaneity and naturalness of conversation. He was devoted to the fine things of the mind. Superstition, brutality, ignorance, and dogmatism all came within the range of his raillery and scorn. Had he lived a little later he probably could not have escaped evil consequences.

Erasmus was rationally but not metaphysically minded. He ridiculed both philosophers of his time, who ''never yet made one considerable discovery, as appears from the fact that on no single point of the smallest moment have they unanimously agreed,'' and divines, who ''will thunder out so many rattling terms as shall frighten an adversary into conviction'' and who ''will tell you to a little all the successive proceedings of Omnipotence in the creation of the universe.'' Erasmus was fundamentally, like Petrarch, the literary man. It was said in his time that he laid the ecclesiastical egg and Luther hatched it, but he remained a Catholic, and though he attacked monasticism and the abuses of the clergy he had no inclination toward any course looking to the disruption of the Church and the fundamental doctrines of Christianity.

His attack was usually by way of a pure ridicule, devoid of personalities and abuse, but occasionally he struck with a direct and forceful blow. Witness his attack in *The Praise of Folly* upon pardons and indulgences:

> By this easy way of purchasing pardons, any notorious highwayman, any plundering soldier, or any bribe-taking judge shall disburse some part of their unjust gains, and so think all their grossest impieties sufficiently atoned for; so many perjuries, lusts, drunkennesses, quarrels, bloodsheds, cheats, treacheries, and all sorts of debaucheries, shall all be, as it were, struck a bargain for, and such a contract made, as if they had paid off all arrears, and might now begin upon a new score.[10]

More often, however, as in his *Colloquies* and in much of *The Praise of Folly,* the method is a subtle and semi-humorous description or account in which the abuse attacked appears in its most absurd light. One of the most famous is to be found in *The Shipwreck,* one of the *Colloquies:*

> B. Some vowed to be Carthusians. One promised to go to James of Compostella with bare head and feet, his body covered only with an iron coat of mail, and begging his food.
>
> A. Did nobody mention Christopher?
>
> B. I could not help laughing when I heard one with a loud voice (lest he should not be heard) promise Christopher in the high church at Paris, a mountain rather than a statue, a wax candle as big as he himself. While he was shouting this at the top of his voice, with now and then an additional emphasis, an acquaintance nudged him with his elbow and said, "Take care what you promise; for if you sell all your goods at auction, you will not be able to pay." Then said he in a lower voice, lest Christopher should hear: "Hold your tongue, fool; do you think I am in earnest? When once I reach land, I will not give him a tallow candle." . . .

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[10] Albert Hyma, *Erasmus and the Humanists* (New York: F. S. Crofts and Co., 1930), p. 80.

A. But did you not implore the protection of some saint?
B. Not even that.
A. Why not?
B. Because Heaven is a large place. If I commend myself to some saint, St. Peter for example, who is most likely to hear me first of all, since he stands at the door; before he goes to God and explains my case I should have perished.
A. What did you do, then?
B. I went straight to the Father himself, saying: "Our Father who are in Heaven." None of the saints hears sooner than He, nor gives more willingly what is asked.[11]

Erasmus spent long years in editing the works of church fathers, but, more important from the humanistic point of view, he made a translation of the New Testament from Greek into Latin. While his translation was far from a thoroughly scholarly piece of work, yet it disclosed some of the errors of the Vulgate and opened the way for later criticism.

HUMANISM AND EVANGELISM

Significantly, the man who was to carry to the Western World a doctrine antagonistic to humanism lived as a contemporary of Erasmus. This doctrine may be called evangelism. Martin Luther began his religious teaching with a reversion to Augustine's emphasis upon the place of faith and conversion as central in the scheme of salvation, and as opposed to the doctrine of salvation by "works." Luther insisted also on going back to the ways of the very early Church and reviving from it the concept of the "priesthood of the believer." Such doctrines tend distinctly to elevate the importance of man. Luther conceived of divine grace as obtainable by all men; he appealed repeatedly to the German people for their support in religious controversies; he spoke and wrote in German, the language of the people; he translated the gospels into the common man's language; and he advocated a system of education that should foster the welfare of the common man's children. While Luther was not a thoroughgoing humanitarian in the modern sense, there were phases of his life and teachings that have become elements of modern humanitarianism. As Zweig has pointed out,[12] the temperaments of Erasmus and Luther were antithetical in many respects. Each man was aware that his own weakness lay in the direction of the other's strength; they avoided direct contact and they developed a mutual aversion (much as humanist and humanitarian do today). Luther possessed an abounding vigor, an overwhelming heartiness and zeal; he stood for or against a proposition with his whole soul; he could love or hate magnificently, and this vital power attracted men, as it does wherever it occurs. At the same time, Luther's tastes were coarse; there was something Rabelaisian about his eating and drinking, and he never escaped certain of the manners and tastes of the peasant's son—which, however, was not a liability in the eyes of the masses. On the other hand, Erasmus, while he worked long and indefatigably, had none of that masterful momentum that swayed multitudes. His appeal was usually subtle and witty, directed to men's minds, not their hearts; he disliked conflict, and distrusted the mob; he lived elegantly, was delicate of stomach, and could drink nothing but certain choice wines; he preferred to live in the world of the intellectual and the artistic—a world of discrimination. It is not strange that these two great minds, though they held certain important principles in common, remained apart from each other.

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[11] *Ibid.*, pp. 40-41.

EVANGELISM AND HUMANITARIANISM

It is a commonplace that many times results flow out of reform movements which the reformers in nowise foresee or intend. Luther, in his early career, set out to refute the heresy of Pelagius, a native of Britain, who stressed—in opposition to the doctrine of man's depravity through the fall of Adam—man's innate goodness, and the role of free will in choices between good and evil. Reacting against scholasticism, he undertook to revive the original Augustinian doctrine of salvation by inscrutable process, but by his evangelism he unwittingly turned the tide toward rather than away from a Pelagian emphasis upon human worth.

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[12] Stefan Zweig, *Erasmus of Rotterdam,* tr. by Eden and Cedar Paul (New York: The Viking Press, 1934).

This word *evangelism,* from the Greek, and the word *gospel,* from the Anglo-Saxon, have the same meaning—"good news." Thus evangelism pointed back to what its proponents felt to be the original core of Christianity—the thrilling news that man had been provided with a way of salvation, a means of escape from his doom. It placed tremendous emphasis upon saving men; and any movement of such intensity must imply that what it sets out to rescue is worth the rescuing. Man's inherent worth is implicit in every evangelistic pronouncement. Furthermore, the driving power behind this movement is emotional in nature and is made upon such level as to appeal to the man of simplest understanding. The great revivals of the Wesleys and of Whitefield in the eighteenth century and those orgies of the American backwoods known as "camp-meetings" during the first half of the nineteenth century bear testimony to both the emotional nature and the mass imagery of these appeals.

The Catholic Church, from the time of Saint Thomas Aquinas on, at least, has found it necessary to make some place for reason in its general scheme of things, but evangelism, insisting that theology consists entirely in interpreting the Written Word, becomes a ready prey to emotional appeals. Conscience reduces entirely to a matter of feeling; the guide to conduct comprises, first, the written command, and second, the emotional conception of the brotherhood of man. It is not difficult to see that between this evangelism which swept early nineteenth-century America and various reforms that then made history there is a close and enduring tie. Thus whether these appeals have been made under the aegis of an evangelistic religion or in the guise of plain humanitarianism, they have been addressed to the American people in terms of sentiment so similar that, to the humanist, they are almost interchangeable, and one form is quite as objectionable as the other.

HUMANITARIAN REFORM MOVEMENTS IN AMERICA

As pointed out in the last chapter, American humanitarian reform movements had their first great development as part of the era that brought about the election of Andrew Jackson. Religion, politics, education—all forms of institutional and social life—were under fire and each new attack added to the general confusion. Fourierism, brought to this country in 1840 by Albert Brisbane, advocated a completely new and millennial social structure by means of ''phalanxes,'' or groups of families, each occupying six thousand acres of fertile land. Brook Farm, headed by Bronson Alcott, became one of these phalanxes in 1844.

Public executions were still the vogue in 1833, but the showmanship of some of these events (as when ten thousand people gathered on a special holiday to witness the spectacle) called forth a storm of protest, and the movement against capital punishment got under way. In 1841, Dorothea Lynde Dix began her investigations as to the care of the insane and the idiotic, who up to this time had been confined in jails and almshouses. Chains and cages were common, together with the most inhuman neglect. By 1850, Miss Dix had traveled sixty thousand miles and induced many state legislatures to establish hospitals for the insane. The lottery was attacked as a depraving influence in 1830, and within six years many of the states had abolished it. Imprisonment for debt was eliminated. More liberal suffrage conditions were established with the writing of new state constitutions, and the movement for woman suffrage was initiated. It is not surprising that during this period public education made its first great strides. Massachusetts led the way under Horace Mann [13] and other states followed suit.

But that humanitarian movement with most far-reaching repercussions was the agitation leading to the abolition of slavery, and probably no figure occupied a more central position in this movement, in its strictly humanitarian aspects, than Harriet Beecher Stowe. Daughter of a minister, wife of a minister, sister of six ministers, and mother of a son who later became a minister, she early conceived the task of writing *Uncle Tom's Cabin* in terms of an evangelistic mission. Moreover, it was born of emotion, not mere creative fervor.

> The first part of the book ever committed to writing was the death of Uncle Tom. This scene presented itself almost as a tangible vision in her mind while sitting at the communion table in the little church in Brunswick. She was perfectly overcome by it and could scarcely restrain the convulsion of tears and sobbings that shook her frame. She hastened home and wrote it, and her husband being away she read it to her two sons of ten and twelve. The little fellows broke out into convulsions of weeping, one of them saying, through his sobs, "Oh! Mamma, slavery is the most cursed thing in the world!" From that time the story can less be said to have been composed by her than imposed upon her.[14]

Its effect is well illustrated by a letter from an intimate friend of the author soon after its publication:

> My dear Mrs. Stowe:
>
> I sat up last night until long after one o'clock, reading and finishing "Uncle Tom's Cabin." I could not leave it any more than I could have left a dying child; nor could I re-

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[13] See Chapter VIII, p. 231.

[14] Written by Mrs. Stowe as an introduction to an illustrated edition some time after the first publication. Quoted from *Life and Letters of Harriet Beecher Stowe*, ed. by Annie Fields (Cambridge: Riverside Press, 1937), pp. 146-47.

> strain an almost hysterical sobbing for an hour after I laid my head upon my pillow. I thought I was a thorough-going abolitionist before, but your book has awakened so strong a feeling of indignation and compassion, that I seem never to have had *any* feeling on this subject till now.[15]

It should not be inferred that Mrs. Stowe confined her efforts to writing. During the years she lived at Cincinnati, across the Ohio River from a slave state, she was active in ministering to fugitive slaves and in raising funds with which to purchase their freedom. She carried on correspondence of international scope, and promoted anti-slavery activities of all kinds. But her great and abiding work was done through an appeal designedly emotional.

Today some of the humanitarian aspects of Christianity are identified by the phrase, "the Social Gospel." Many preachers and churches use it, but in doing so, disclaim any attempt to separate ethics from Christianity. That is, this so-called social gospel is not to be regarded, they say, as non-theistic, yet its repetitious insistence upon mass approach makes it immediately suspect with critics of humanitarianism.

HUMANITARIANISM IN PHILOSOPHY AND LITERATURE

But humanitarianism is not limited to sentimental interpretations of the Christian ethic. It has had a modern career of rational and literary origins, particularly in connection with the teachings of Rousseau and with the literary movement known as Romanticism.

Jean Jacques Rousseau derived inspiration from English Deism,[16] though only as a point of departure. He followed the Deists in revolting from the old orthodoxy and in endowing all men with natural goodness, but he never felt any of those restraints that men commonly attribute to the influence of reason. However, the fact that American education has been more deeply affected by humanitarianism than that of any modern nation is traceable in large part to the influence of this erratic Frenchman as it has fallen on those conditions of life we conceive as peculiarly American. It behooves us, therefore, to pay him special attention.

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[15] *Ibid.*, pp. 149-50.

[16] See Chapter XIII, p. 399.

In an attempt to account for his effectiveness, Randall writes:

> Just because he was not bound by the interests and the logic of his age, he was able to perceive very clearly certain great principles to which his contemporaries were blind; and after ten years, he published, in 1762, his two chief contributions to the science of society, the *Emile,* dealing with education, and the *Social Contract,* dealing with government. These were masterpieces of propaganda rather than systematic investigations; they accepted the concepts and the ideas common to eighteenth-century political and social science, but in large measure cut loose from the historical antecedents of these ideas, and from the science of human nature upon which they were ostensibly founded. Whatever is original in Rousseau—and his influence was far too great to make that very extensive—is due to his expression of the feelings of his time, and his blending of those feelings with the accepted ideas. . . . Thus, where others demonstrated the Religion of Nature, Rousseau actually believed it; where others assumed liberty and equality, he really believed in putting them into practice. Hence, in spite of all that is despicable and pathological in his character, we cannot escape the conviction, any more than his contemporaries could, that at bottom there was something sterling there, something that attracted warm admirers and gained him a patient indulgence for all his foibles; he was sincere, he rang true. Into the atmosphere of more or less hypocritical rationalization of both traditional beliefs and new demands, of unreality and artificiality, of cynicism and intellectual insincerity, he brought something, something new, something needed, something powerful and strong, that served as a flaming banner of genuine revolt.[17]

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[17] J. H. Randall, Jr., *The Making of the Modern Mind* (Boston and New York: Houghton, Mifflin and Co., 1926), pp. 350-51.

But Irving Babbit would deny that there was anything inconsistent in the "despicable" side of his character and his notions of liberty. He comments:

> . . . nothing is easier to prove than that if Rousseau was an execrable wretch, it was directly because of his ideas of liberty. . . . Virtue is no longer to be the veto power of the personality, a bit and a bridle to be applied to one's impulses, and so imposing a difficult struggle. These impulses, Rousseau asserts, are good, and so a man has only to let himself go. Instead of the still small voice that is heard in solitude and urges to self-discipline, virtue is to become a form of enthusiasm; it is to be raised to the dignity of a passion much as the elder Dumas claimed to have raised history to the dignity of the novel. "If not virtuous," says Rousseau sublimely, "I was intoxicated with virtue." He was a moral impressionist not so much like the ancient sophist through excessive intellectual pliancy, as because he would thus rest virtue on the shifting quicksands of sensibility. For him, as for Coleridge, everything became impossible when it presented itself as a duty or obligation. He will hear of no norm of conduct which is set above individual feeling.[18]

In Rousseau's doctrines, innate goodness comes fully into its own, and not in terms of intuition, or insight, or reason, but in terms of spontaneous impulse. Rousseau is ready to admit that man is evil, but that evil has appeared in him only as a result of social life and the institutions imposed upon him by society.

> Everything is good as it comes from the hands of the Creator: everything degenerates in the hands of man. . . . He is not content with anything as Nature made it, not even his fellowman. Even his offspring must be trained up for him like a horse in his stable, and must grow after his fancy like a tree in his garden.[19]

To recover his pristine virtue man must have a new government and a new education. That is, he must have a new freedom. "Man is born free," he cries in the *Social Contract,* "and yet is universally enslaved." And again, "If there are any slaves, therefore, by nature, it is because they are slaves contrary to nature." Rousseau's writing is an excellent example of what the psychologist calls rationalization. He himself was largely the product of his impulses. Feeling and desire ruled him, yet he elaborated the most detailed defenses and trains of argument to make such conduct appear "reasonable." On the other hand, there can be no doubt that Rousseau inspired revolt where revolt was needed, and initiated wholesome reform.

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[18] Irving Babbitt, *Literature and the American College* (Boston and New York: Houghton, Mifflin and Co., 1908), pp. 49-50.

[19] The opening sentences of Rousseau's *Emile.*

Romanticism reached America through the influence of German literature in the work of Goethe, Herder, Schlegel, and Schiller and through the English works of Wordsworth, Coleridge, Carlyle, and Ruskin. It is in connection with this train of thought that the name of Emerson is often introduced in America, though it is in Whitman that we find the full surge of American romantic humanitarianism. Whitman was the lover of all men, just because they were human, and he loved them in the mass. He wrote:

I will sing the song of companionship . . .
I will write the evangel-poem of comrades, and of love; . . .
I am the credulous man of qualities, ages, races;
I advance from the people in their own spirit;
Here is what sings unrestricted faith.[20]

Nor did this "unrestricted faith" disappear with Whitman. The Spanish-American War, with the American assumption of "the white man's burden," the proclamations of freedom for Cuba and the Philippines (with real motives left unsaid or said *sotto voce*) the war to make the world "safe for democracy," the "great experiment" with prohibition, and some of the phases of both the "Square Deal" and the "New Deal" were conceived, to greater or less degree, in terms of Whitmanian humanitarianism. It is a sentiment to which the American people have proved peculiarly susceptible.

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[20] From Whitman's *Starting from Paumanok,* stanzas 6 and 7.

It should be plain, however, that there are few people who go about modern society calling themselves specifically *humanitarians.* They are, first, religionists, or social workers, or educationists, or Rotarians, or Elks, or Square Dealers, or New Dealers, and, in their own minds, they are only secondarily humanitarians. Nevertheless, the trend in education, government, and various other social movements bears indisputable evidence of the dominance of the humanitarian urge in present-day America. Nor is there lack of consciousness of the movement or the name. The point is that when humanitarianism takes the offensive against the positions of humanism it does so in terms of a more specialized social organization. Our concern later in the present volume will be to trace this conflict in the field of education, and, to point out a sounder ground for reform in active liberalism and organicism.

MODERN AMERICAN HUMANISM

Perhaps our best introduction to modern American humanism can be obtained by contrasting Whitman's attitude with Everett Dean Martin's insistence upon discrimination as to one's neighbors. In *Civilizing Ourselves,* the latter says:

> Even amongst the crowds we see it is perfect nonsense to say that we love them all indiscriminately. I am commanded both by Christianity and humanitarianism to love my neighbor; and in the latter my neighbor is not only my trusted friend, but also the man who gives noisy all-night parties in the apartment overhead, or the unbathed, foul-smelling person sitting next to me in the subway, or the annoying peddler who made my walk in Naples a bore, or the crook who breaks into my office and tries (sometimes with success) to cheat me, or the Tammany politician who increases my taxes, or the porch-climber against whose prowlings I have to lock my doors, or

> the annoying people I have sometimes to meet at dinners and pass on the street. May I not have some choice amongst my neighbors?[21]

Martin is fearful of crowds and of crowd reactions and inveighs against the blight of mediocrity. He argues that:

> Humanitarianism is not so much a restatement of the gospel of good will among men as it is a sentimental and romantic compensation for capitalism and democracy, and a rationalization of the collective egoism of common men. In idealizing man in general, it idealizes average man, natural rather than cultured man.[22]

He voices the conviction that the solution of modern dilemmas lies in the recognition of and advancement of intelligence and reason (supplemented, of course, by high integrity) to a place of power and direction in the affairs of men.

> The "new start" means that the direction and the control of America must be taken away from the politician, the business man, the man in the street, and be vested in an intelligent and farsighted minority. . . . The real new start is that begun by a generation of men and women who become conscious of their maturity, who try to discard adolescent wish-fancies and popular fictions, and set out to put this world in some kind of order.[23]

The use of the word *maturity* reminds one of Walter Lippmann's contention in his *Preface to Morals* that "we can, as it were . . . regard the history of each soul as the history of its progress from infantilism to maturity," and such progress is to be conceived as the "matrix of humanism." This progress is not always achieved. In some persons development is arrested; and they remain, emotionally speaking, children throughout their lives. Nor is such an unhappy circumstance, necessarily, the result merely of a lack of mental capacity. People with good brains may be utterly lacking in "maturity," having failed in the physical transition from childhood to adulthood to make the necessary adjustments emotionally. The immature person is apt to regard the universe as man-centered, and the purpose of life as converging completely in himself—attitudes which the environment of childhood inevitably tends to establish; but "the successful passage into maturity depends . . . on a breaking-up and reconstruction of those habits which are appropriate only to our earliest experience."

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[21] E. D. Martin, *Civilizing Ourselves* (New York: W. W. Norton and Co., 1932), p. 133. (See also his *Behavior of Crowds* and the *Conflict of the Individual and the Masses.*)

[22] *Ibid.,* p. 146.

[23] *Ibid.,* pp. 265-66.

Lippmann and Martin are not usually included among the modern group of men who may be called the "literary humanists." Irving Babbitt strongly objects to Lippmann's "flagrant misuse" of the word *humanism,* because he feels humanism calls for adjustment to the world of humanity as well as adjustment to the natural order. "It insists, in short, that there is a 'law for man' as well as a 'law for thing,' and is, in this sense, dualistic." Babbitt sums it up thus:

> Whatever reality man achieves in his dealings with either the human or the natural order, is dependent, I have tried to show elsewhere, on the degree to which he establishes a correct relationship between the part of himself that perceives, the part that conceives, and the part that discriminates. The part that conceives, that reaches out and seizes likenesses and analogies, may be defined as imagination; the part that discriminates and tests the unity thus apprehended from the point of view of its truth may be defined as analytical reason; the part that perceives is, in the case of the humanist, primarily concerned with the something in man that is set above the phenomenal order and that I have already defined as a power of control.[24]

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[24] In *Humanism and America,* ed. by Norman Foerster (New York: Farrar and Rinehart, Inc., 1930), p. 43.

It will be seen at once that echoes of this point of view are to be found throughout modern English and American literature. One recalls Matthew Arnold's famous exposition of Swift's phrase, ''sweetness and light,'' his identification of culture with ''a study of perfection''; his analysis by way of excess, mean and defect—the Aristotelian approach to the golden mean—of such groups as the aristocracy, the middle class, and the working class of England; and his admiration of Sophocles' ability to ''see life steadily and see it whole.'' Gorham Munson introduces Arnold ''as a model humanist, one whose life and work may show us better than any abstract discourse what contemporary humanism aspires to be.'' Santayana, on the other hand, characterizes Arnold's humanism as a ''pensive agnosticism and a charmed culture,'' but this is undoubtedly too brief a dismissal. Santayana's own life and thought would hardly be called rugged.

Modern humanism has been concerned principally with a campaign (although the group would perhaps resent that word as implying too much heat) against humanitarianism, seeking definitions, and treating of the relation of humanism and religion. Especially clear in definition have been the essays of T. S. Eliot, who has insisted that humanism is a general culture, not a dogma nor a philosophical theory, that its function is critical rather than constructive. ''Its business is to persuade, according to its unformulable axioms of culture and good sense. It does not, for instance, overthrow the *arguments* of fallacies like Behaviorism.'' Religionists of many kinds have attacked humanism, as is to be expected when it undertakes to supplant religion or to regard itself in the guise of religion. Paul Elmer More throughout his work maintained a distinction between the two, and it is interesting to note that Babbitt in his later writing also ascribed a separate function to the supernatural,[25] but many of the younger humanists are too deeply affected by materialistic science (whether they admit it or not) to be able thus to set up dualistic systems, and they frankly aspire to ways of thinking that shall be a substitute for the older religions among intellectual people.

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[25] "Though humanism and religion both lie on the same ascending path from the naturalistic flux, one must insist that each has its separate domain. It is an error to hold that humanism can take the place of religion." *Humanism and America,* p. 43.

The "new humanism," especially as represented by Babbitt and More, has come in for direct and severe attack, too, from younger literary critics.[26] Some of these defend certain values to be found in romanticism, most of them recognize the importance of allotting a place to social life, and almost to a man they stress the inevitable change in modern outlook wrought by science. But there is a third contemporary group who are able to see both strengths and weaknesses in humanism, who conceive of it as a rallying-ground of present-day culture for a drive toward that culture's culmination, and who, either through or beyond humanism, seek a larger synthesis. Notable among this group are Gorham Munson, Lewis Mumford, and George Santayana. A remark of the last-named is particularly worth quoting in this connection:

> All experience can of course never be synthesized, because life is a passage and has many centres; yet such a synthesis is adumbrated everywhere; and when it is partially attained, in some reflection or far-seeing moment, it raises the mind to a contemplation which is very far from cold, being in fact ecstatic; yet this ecstasy remains intellectual in that it holds together the burden of many successive and disparate things, which in blind experience would exclude each other.[27]

Thus modern American humanism, while it has made no popular appeal (naturally), has been provocative of critical and, in some cases, significantly constructive thought among a small number of able American scholars.

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[26] See *The Critique of Humanism, A Symposium,* ed. by C. Hartley Grattan (New York: Brewer and Warren, Inc., 1930).

[27] George Santayana, *The Genteel Tradition at Bay* (New York: Charles Scribner's Sons, 1931), pp. 66-67.

Reading List

Aristotle (tr. by D. P. Chase), *Nichomachean Ethics* (New York: Dutton, 1915). Book II.

Babbitt, Irving. *Rousseau and Romanticism* (Boston and New York: Houghton Mifflin, 1919). Chapters 3 and 4.

Eliot, T. S. *Essays Ancient and Modern* (London: Faber and Faber, Ltd., 1936). Pp. 75-91.

Rousseau, J. J. (tr. by Barbara Foxley), *Emile or Education* (New York: Dutton, 1911). Book I.

Schiller, F. C. S. *Humanism* (London: Macmillan, 1907). Chapter 1.

Zweig, Stefan (tr. by Eden and Cedar Paul), *Erasmus of Rotterdam* (New York: Viking Press, 1934). Pp. 130-173.

XII. PRAGMATISM AND IDEALISM[1]

AN educational controversy that attracted wide attention took place early in 1937 between John Dewey and Robert Maynard Hutchins in connection with the publication of the latter's *The Higher Learning in America.*[2] In this book Hutchins proved himself an idealist and a humanist, though he applied neither label to himself. Nobody but an idealist could say, ''The truth is everywhere the same'' and quote approvingly Paul Shorey's statement:

> If literature and history are a Heraclitean flux of facts, if one unit is as significant as another, one book, one idea the equivalent of another, . . . we may for a time bravely tread the mill of scholastic routine, but in the end the soul will succumb to an immense lassitude and bafflement. But if . . . the flux is not all, if the good, the true, and the beautiful are something real and ascertainable, if these eternal ideals re-embody themselves from age to age essentially the same in the imaginative visions of supreme genius and in the persistent rationality and sanity of the world's best books, then our

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[1] It is important to distinguish between what may be called imaginative idealism and idealism in the philosophic sense. The former deals with a perfect sort of pattern or type of excellence—the acme of the good. The latter implicitly includes some of this, but basically is concerned with interpreting the universe as the "realization of a system of ideas." Here we are dealing with idealism in the more basic philosophic sense.

[2] See *The Social Frontier,* III, 21-25 (Dec., 1936-March, 1937), 71ff, 167ff.

> reading and study are redeemed, both from the obsessions of the hour, and the tyranny of quantitative measures and mechanical methods.[3]

Hutchins identifies himself as a humanist in his emphasis upon the intellectual content of education (and concurrently in his opposition to vocational and technical training, character training, health programs, and the inclusion of schooling in the social graces), his emphases upon turning to the past for the materials of education, upon mental discipline, the classics, grammar, and rhetoric. As humanist, also, he raises the standard of metaphysics, though here again the idealist discloses himself in his thinking of general principles as final and eternal.

Dewey openly advocates a philosophy called instrumentalism, a derivative of pragmatism. Ideals and every other part of our experience, says this philosophy, are valuable to the degree that they are instrumental in the process of adaptation to the problems of our environment. In his final reply to Hutchins he makes the issue between them very specific:

> I understand President Hutchins to hold that there is a power or faculty of Reason or Intellect (in the sense in which these words have been understood by great figures in the history of philosophy) which is capable of grasping first and ultimate truths that are the measure and criterion of all inferior forms of knowledge, namely, those which have to do with empirical matters, in which knowledge of both the physical world and practical affairs is included. . . .
>
> I believe there is but one ultimate alternative; namely, the primary place of experience, experimental method, and integral connection with practice in determination of knowledge and the auxiliary value of what is termed Reason and Intellect in the classic tradition.[4]

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[3] Robert Hutchins, *The Higher Learning in America* (New Haven: Yale University Press, 1936), pp. 64-65.

[4] *The Social Frontier,* III, 25 (March, 1937), 167.

It can be said without hesitancy that no figure in modern American education has had so profound an influence as John Dewey. His educational philosophy is known and quoted by schoolmen from one extreme corner of the country to the other. Yet it is doubtful if many of these same schoolmen know and understand the philosophical groundwork upon which his educational thinking rests.

Pragmatism has been called the American philosophy, but this is true only in the sense that it has had outstanding advocates in this country, has received here careful and systematic development, and is peculiarly congenial to the American cast of mind. The term derives from a Greek work meaning action, a root to be found in our words *practice* and *practical.* Hence the criterion of the pragmatist as applied to ideas has been their workability and their applicability—their "making a difference"—in human life. However, a kind of dichotomy is to be found within American pragmatism. James continued to reach out for a metaphysical framework, a source of beliefs not necessarily derived from science; while Dewey has restricted himself almost wholly to treatment of method, insisting upon scientific experimentation as the mode of human procedure toward truth. Experimentalists join heartily, therefore, in employing "workability" as a criterion of truth, and the instrumentalists among them agree in making human values as they are worked out in social experimentation the supreme good of life, and in espousing programs of social amelioration. Dewey has even been called a humanitarian (by Professor Irving Babbitt, for example), but he cannot be so classified according to the marks of identification set down in our last chapter. The humanitarian as there defined was one driven by unbalanced sentimental fervor, and no one can well accuse Dewey of sentimentalism. Instrumentalism, growing out of modern science from the time of Galileo on, has produced in a few cases some rather ecstatic visions, but by and large, even when concerned with the most promising possibilities of applied science and their future outcomes for human welfare, instrumentalists and their predecessors have been notably practical and ‘‘hard-headed.’’

Instrumentalism is, also, avowedly positivistic. Positivism looks upon Nature as final reality. There is nothing beyond it or behind it. The word *supernatural* or the word *transcendental* becomes not only meaningless, but gravely misleading from the point of view of naturalism, and this explains Dewey’s intense dislike for both terms. In both his *Reconstruction in Philosophy* and the *Quest for Certainty,* Dewey has explained the basis of his attitude. He feels that there is no such thing attainable as an ‘‘Absolute Truth’’ or an ‘‘Ultimate Reality,’’ and the attempt of philosophers and others to find a ‘‘refuge’’ of this kind is both futile and tragic. Courageous living calls for putting aside such phantasms and facing things as they are, with all their harshness and uncertainty; for only in this way can we hope to make real improvement in human conditions. It is perhaps significant that John Dewey was already fifty-six years old when the theory of relativity was fully expounded in 1915. Nineteenth-century science was thoroughly mechanistic. Nature’s ways could all be reduced to unalterably quantitative laws; and the tracing and formulation of these laws in quantitative terms by science constituted the pathway to truth. Writing but a few years ago, Dewey made his appraisal of science:

> The method we term ‘‘scientific’’ forms for the modern man (and a man is not modern merely because he lives in 1931) the sole dependable means of disclosing the realities of existence. It is the sole authentic mode of revelation. This possession of a new method *to the use of which no limits can be put,* signifies a new idea of nature and possibilities of experience.[5]

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[5] *Living Philosophies, a Symposium* (New York: Simon and Schuster, 1931), p. 24. (Italics not in the original.)

Instrumentalism leads, therefore, logically to both relativism and opportunism. Dewey himself avoids those conclusions, for after all he has much of the older pragmatism in his outlook; but some of his followers delight in pointing them out. Clarence Edwin Ayres[6] declares the ''sole measure of the success of a society is the number of men alive in that society with no reservation but that of good sense or sincerity.'' Vague maunderings about the ''ends'' of a civilization, he would say, are nonsense. Endorsing a materialistic-instrumental standard, with the philosophies of Dewey and Thorstein Veblen as his starting-point, he proceeds to certain conclusions:

> Science is an activity: the activity of handling materials with instruments. . . . Science does not ''lead to'' materialism. Science is materialism. The only way the ''social sciences'' can be truly scientific is by assuming this, the only scientific state of mind, and regarding civilization as the series of physical activities of material beings. . . . It is impossible to cherish creation myths after accepting Copernican astronomy: hence the importance of astronomy. But it is equally impossible to cherish the Ten Commandments after accepting the results of archæological research. The whole effect of modern anthropology and sociology has, of course, been to bring established morality into the same disrepute which a little earlier overtook theology. The effect of this is a complete moral relativism. . . . Most of the men whose statesmanlike skill in playing the institutional game has won them the accolade of genius have been cynics and ''opportunists''; they have had no illusions about their countries or their parties or their corporations, but they have merely bargained with fate. . . . The world has suffered less from its cynical opportunists than from its demoniac fanatics.[7]

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[6] See his essay "The Gospel of Technology," in *American Philosophy Today and Tomorrow,* ed. by Kallen and Hook (New York: L. Furman, Inc., 1935), pp. 25-42.

[7] One is reminded of Dewey's sentence: "The world has suffered more from leaders and authorities than from the masses." John Dewey, *The Public and Its Problems* (New York: Henry Holt and Co., 1927), p. 208.

Now, however inevitable it may be that certain of the premises of instrumental philosophy lead to this kind of conclusion, it is perfectly clear from his writing that Dewey himself holds no such scorn for the ''higher'' human values, even though they emanate from institutions. He deplores the fact that ''skepticism becomes the mark and even the pose of the educated mind'' and pleads for a faith operating ''throughout the length and breadth of human relations,'' but operating ''on the basis of verifiable realities.'' If such a faith were to become active among human beings, ''the consequences would be incalculable.'' He does not assume that even so well-entrenched an institution as the Church would necessarily be destroyed.

> The transfer of idealizing imagination, thought, and emotion to natural human relations would not signify the destruction of churches that now exist. It would rather offer the means for a recovery of vitality. The fund of human values that are prized and that need to be cherished, values that are satisfied and rectified by all human concerns and arrangements, could be celebrated and reinforced, in different ways and with differing symbols, by the churches.[8]

Several of these words and phrases, such as ''idealizing imagination,'' ''human values,'' and ''symbols,'' coming from one completely committed to the scientific method call for comment. It should not be forgotten that Dewey was thoroughly grounded in idealism as a young man, and he has never departed from a hearty and outspoken allegiance to practicable means of human betterment; the true pragmatist is an altruist. Dewey's quarrel has been with the tendency to call things ''ends that are not ends save accidentally, since they are not fulfillments, consummatory, of means, but merely last terms closing a process''[9]—that is, to give these values an entity or an existence outside the activities of human experience. Thus Dewey has a place even for intuition, but again as leading only to a kind of synthesis within experience.

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[8] John Dewey, *A Common Faith* (New Haven: Yale University Press, 1934), p. 82.

[9] See John Dewey, *Experience and Nature* (Chicago, London: Open Court Publishing Co., 1929), Chapters 9 and 10.

DEWEY'S AMERICAN PREDECESSORS

John Dewey holds the third place, chronologically, in the great American triumvirate of pragmatism. The two older men were William James and Charles Peirce.[10] The thinking of James was the result of reaction against what he called the rationalism of his day. He was a contemporary of the American, Josiah Royce, who with other idealists following Hegel, had developed, according to James, a highly abstract and tenuous philosophy that blinked the facts of life. He charged them with being “tender-minded,” and called for more realistic facing of the pains, evils, and actual conditions of human existence, an attitude he called “tough-minded.” In a famous double-column of traits he characterized these two classes of minds:

The Tender-Minded	*The Tough-Minded*
Rationalistic (going by ‘principles’)	Empiricist (going by ‘facts’)
Intellectualistic	Sensationalistic
Idealistic	Materialistic
Optimistic	Pessimistic
Religious	Irreligious
Free-willist	Fatalistic
Monistic	Pluralistic
Dogmatical	Sceptical[11]

It would be overbold for anyone to attempt characterization of the mythical average American by way of these two categories. Yet some of the traits in each can pretty certainly be ascribed to him. Without question he accounts himself factually-minded and proudly acclaims his belief in the hard-and-fast actualities of life—to be found in materials and sensations of pain and pleasure—rather than in vague generalizations or ethereal intuitions. On the other hand, he has been, generally speaking, more optimistic than pessimistic, more ''free-willist'' than fatalistic (*deterministic,* as we would say now), and more dogmatic than skeptical. James himself was aware of some of these inconsistencies, declaring that while more men were showing a ''decidedly empiricist proclivity'' than ever before, yet the esteem for facts had not neutralized all religiousness. Probably Dewey could more completely qualify on the ''tough-minded'' scale than James, but Ayres[12] could easily outscore either of them.

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[10] Pronounced *purse.*

[11] William James, *Pragmatism* (New York: Longmans, Green and Co., 1907), p. 12.

James gives voice to a note of empiricism, ever recurrent in English and American thinking from the days of Bacon, Hobbes, and Locke. But, in addition he represents the American belief in activity, the fundamental importance of a point of view of life that can best be put into terms of deeds, not ideas. And although James sought metaphysical foundations for his thinking, and though he was willing to give pragmatic weight to belief—even fantastic belief—if it yielded worthwhile results in the individual's life, yet his logic drove him inexorably to the position of relativism. On a paper on his desk when he died was found his last philosophic expression:

> There is no conclusion; what is concluded that we might conclude in regard to it? There are no fortunes to be told, and there is no advice to be given. Farewell.

The man most directly responsible for the introduction of pragmatism into American thought was Charles Peirce. In January, 1878, he published an article in the *Popular Science Monthly* entitled ''How to Make our Ideas Clear,'' from which James took his cue for further developments. Peirce was thoroughly grounded in science, and his thinking in this connection was more closely related in some ways to that of Dewey than to that of James. However, a study of Peirce's philosophy leads to the conclusion that later pragmatism seized upon only part of his thinking; and some of James' and Dewey's applications of this to problems of truth and conduct did not have his agreement. In fact, most of Peirce's philosophy was definitely idealistic, and certain of his permanent metaphysical backgrounds of thinking could never be construed otherwise. Professor Townsend has called him "one American philosopher, and perhaps the only one, worthy of ranking with Edwards for sweep of philosophical imagination and grasp of the deepest philosophical problems." His whole bent was logical, but creative; and though he failed in persistent, systematic effort, some of his constructive thinking was startlingly original. It is another of the ironies of fate that the man who, in the suggestiveness of his writing, may have occupied a significantly prophetic role in modern philosophy should be known almost solely for a minor aspect of his work (the pragmatic) developed out of its true original proportions by others.

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[12] See quotation above, p. 336.

AMERICAN PRACTICALITY

American pragmatism can hardly be regarded as a direct derivative of a chain of American philosophic and scientific thinking. To find the links in this chain we shall have to cross the Atlantic. However, the American *penchant* for practicality must be taken into account in this connection. It is a long tradition with us; some of the world's geniuses in the application of science to human affairs have been American. The founder of the American Philosophical Society, Benjamin Franklin, gained an international reputation for his scientific experiments, but he was never satisfied with mere experimentation; his interest lay in its applications. He was pre-eminently the practical man, superior as an executive, as a business man, and an inventor; he knew how to "do things." Moreover, he was the genial mixer, the public-spirited citizen and the stalwart patriot. Little wonder, especially after he had set down in homely idiom a philosophy of life in practical terms, he came to be regarded as an American sage and *exemplar*. The rigors of pioneer life enhanced the value of his pronouncements, so that as time went on his stature grew rather than diminished, until he became one of those great figures that a nation idealizes and mythologizes to correspond to mass sentiment.

From Franklin to Edison and Ford, American practicality has found continuous expression, and no American can escape its influence. In this sense, therefore, pragmatism becomes an intellectual manifestation of a national "virtue" of long standing. Again, on the naturalistic side, American pragmatism may be traced back through the tradition of John Fiske, Benjamin Rush, Joseph Priestley, and others, but for philosophic antecedents it will be necessary to go first to England. William James dedicated the volume comprising his lectures on pragmatism to J. S. Mill, the great logician of the English group of utilitarians. On the other hand, the instrumentalism of Dewey contains more of the scientific elements found in the thinking of Spencer and Huxley. Both of these trains of thought, however, are traceable to those first great sources of English empiricism, John Locke and Francis Bacon.

ENGLISH NATURALISM

Following the monumental synthesis of Immanuel Kant, philosophic thinking, according to some observers, has followed three different courses. First, there has been the tendency to uphold Kant's contention that the ultimate nature of things is essentially unknowable, and to assign a definite place in that thinking to the unknowable. Second, there is the idealistic group who interpret men's discovery of truth and beauty as indications that the ultimate meaning of the universe is to be found in mind or ideas, of which the thinker or the poet may catch occasional glimpses. And, third,

> there are stalwart thinkers who cannot be classified as belonging to any one group, but who, resenting the vagueness of much system-making, especially the idealistic, are concerned above all to clarify our conceptions piece by piece, accepting nothing that cannot be rigidly demonstrated.[13]

This statement is an excellent definition of the position of experimental naturalism. Such a method is admirably characterized by the phrase, ''piece by piece.'' It refuses to go metaphysical even to the extent of worrying about an unknowable. It is concerned with an immediate unknown, which it maintains may be reduced through the methods of science to a known; further than this it refuses to commit itself. Horace Meyer Kallen, speaking sympathetically of John Dewey's position, mentions ''his feeling for alternatives, his empiricism, his tentativeness and instrumentalism so diffident of dogmatisms and systems.'' A bit further on we shall find some of the origins of this position.

In the generation ahead of Dewey, however, it was not so easy to ignore the unknowable. That generation was still too close to the religious tradition to put completely away an uneasy feeling that immediacy might not prove sufficiently comprehensive as the ground of philosophy. Thus, Herbert Spencer included in his naturalism a considerable quantity of metaphysics. The unknowable became for him a power, or force, persistent in nature and manifesting itself in the evolutionary process. Spencer was the great philosopher of evolution expressed largely in terms of mechanics and material. (He was the originator of the phrase ''the survival of the fittest.'') Yet he believed thoroughly in human progress, and helped to propagate the doctrine that the end of evolution is man's perfection in nature. ''The ultimate development of the ideal man,'' he said, ''is certain.'' Thus Spencer represented the naturalistic temperament, but, with his romantic notion of progress, he could not leave out of consideration any means looking toward social amelioration. He carried his principles and methods into ethics, into education, into sociology, into psychology; and here again he anticipated John Dewey.

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[13] Florence Melian Stawell and F. S. Marvin, *The Making of the Western Mind* (London: Methuen and Co., 1924), p. 276.

ENGLISH UTILITARIANISM

Toward the close of his essay, *Utilitarianism,* John Stuart Mill introduced a footnote stating that Herbert Spencer in his *Social Statics* was opposed to certain implications of utilitarian principles; then later appended the information that ''Mr. Herbert Spencer, in private communication on the subject of the preceding Note, objects to being considered an opponent of Utilitarianism.'' And it becomes increasingly clear that Spencer is a link between John Dewey and utilitarianism when we hear the utilitarian described as

> by temperament and by conviction a pragmatist—practical and concrete; valuing ideas mainly in so far as they work, and in so far as they serve such purposes as men desire and for which they strive. The meaning of this is that his first and great concern is human life, human activity, human well-being.[14]

Jeremy Bentham (1748-1832) was the founder of this school of thought, and first of the trio of its most famous proponents. Bentham was a moral philosopher. He came from a wealthy family of attorneys and was himself called to the bar, but became, instead of the lawyer, the strenuous and outspoken reformer and advocate of reform legislation. This point needs special emphasis, for Bentham was always socially-minded; he was not concerned with individual problems, except as they might have social significance. For example, he wrote the Duke of Wellington reprimanding him for his participation in a duel, and advising him, if he would show moral stamina equal to his physical and personal courage, to go to the House of Lords, confess his error, and declare his repentance. Bentham attacked conditions that he felt led to mendicancy; and he advocated laws for sanitation, for education of the poor, for savings banks, for criminal reform, for election reforms, and many others. But throughout, he was the logical and pragmatic thinker, not the historically-minded philosopher. At least two other points with reference to Bentham should be stressed; though an altruist, he had no sympathy whatsoever with the doctrines of natural rights, and he was not a sentimentalist. Men's hopes, he said, are to be realized through the right kind of legislation, not through abstract theorizing, and that legislation should be guided by one motive. He bore heavily upon the point that the community is comprised of its members and that the interest of the community becomes ''the sum of the interests of the several members who compose it.'' This became known as the ''Greatest Happiness Principle'' described by the phrase, now so commonplace, ''the greatest happiness (or good) to the greatest number.''

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[14] William L. Davidson, *Political Thought from Bentham to J. S. Mill* (New York: Henry Holt and Co., 1916), p. 11.

This Benthamic principle was carried on by James Mill, whose hard, practical, and logical mind and inexhaustible energy made him a national figure as both a reformer and a writer. He is known as the psychologist of the school, and wrote extensively on education. It should be pointed out in connection with his work, also, that though benevolence is a much used word in utilitarianism, it never connotes softness nor sentimentality. It is an ''enlightened'' benevolence; indeed Bentham said of Mill that the latter's enthusiasm for reform arose less from his love of the many than from his hatred of the few. Be this as it may, there is no doubt that Mill was contemptuous of the passions and scornful of anything "intense." Consequently, his son, John Stuart Mill (1806-1873)—one of the great minds of nineteenth-century England—was reared under the most rigid system of logical and classical disciplines which Mill, the elder, could contrive. From its results in his life there came, when he was twenty years of age, a period of revolt and a considerable transformation of view as to the place of feeling and sympathy in human life. He remained the logician, however, and wrote one of the most famous modern works in this field. He never lost sight of social reform as the goal of his life, but his attacks and defenses possessed power and incisiveness because of his ability to reason clearly.

John Stuart Mill was one of the great exponents of the English empirical school. The intuitionists have argued that there are types of knowledge showing characteristics which experience alone can not explain. Mill held this view to be not only false, but a defense for all kinds of "false doctrines and bad institutions. By the aid of this theory," he said, "every inveterate belief and every intense feeling, of which the origin is not remembered, is enabled to dispense with the obligation of justifying itself by reason." Mill believed heartily in the sufficiency of experience in the face of all phenomena; and it is obvious that Dewey, especially, has carried on this same doctrine in America.

Mill's greatest contributions to utilitarianism were his analysis of "pleasure" as containing for loftier beings the loftier pleasures, his vindication of the value of social feelings, in terms, not merely of physical consequences, but of ideals, and his insistence upon the dependence of individual happiness upon the happiness

> of all concerned. As between his own happiness and that of others, utilitarianism requires him [the utilitarian] to be as strictly impartial as a disinterested and benevolent spectator. . . . To do as he would be done by, and to love one's neighbor as one's self, constitute the ideal perfection of utilitarian morality. As the means of making the nearest

> approach to this ideal, utility should enjoin, first, that laws and social arrangements should place the happiness, or (as speaking practically it may be called) the interest, of every individual as nearly as possible in harmony with the interest of the whole; and, secondly, that education and opinion, which have so vast a power over human character, should so use that power as to establish in the mind of every individual an indissoluble association between his own happiness and the good of the whole.[15]

From this kind of statement it is possible to get some insight into the intellectual evolution which resulted in Mill's conversion to socialism in his last years.

POSITIVISM

John Stuart Mill carried on the tradition of English empiricism, as modified by French positivism. But to understand positivism we must turn to the work of the philosopher Auguste Comte (1798-1857). Comte's attitude was, like Mill's, that of the reformer. His works were ambitious attempts to analyze and synthesize all knowledge and then to reorganize society upon the basis of these findings; but he had some of the sentimentalist's attitude toward human progress, and his mystical religion of humanity vied with the romanticism of Rousseau.

Comte's system was built about the "Law of the Three States." He held that human conceptions or ideas have passed through three successive phases; namely, the theological, the metaphysical, and the positive. In the first, man was governed by his ideas of gods and spirits, his imagination served as guide, and natural phenomena were explained in terms of supernatural volition. In the second, reflective thought was substituted for imagination, and supernatural volition gave way to universal energies, though these energies possessed existences distinct from substances. In the final, or positive, stage of thinking, however, man comes to see that experience is the criterion of truth; abstraction has disappeared; facts are basic; relations between facts are sought, but there are many laws, not a single universal law. Thus we have ground for the statement that in positivism "the Unknown" in any universal sense is neither acknowledged nor denied; it is ignored. The explanation of facts is by facts, and facts are those tangible areas of experience which can be classified, measured, and associated with other areas. Comte's great objective was to carry this method into the social sciences, and to reduce human relationships to a scientific basis. He is, thus, rightly regarded as the founder of sociology.

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[15] J. S. Mill, *Utilitarianism,* reprinted from the Thirteenth London Edition (Chicago: University of Chicago Press, 1910), p. 25.

EMPIRICISM

It is significant that Condillac and Voltaire, both intellectual ancestors of Comte, directly acknowledged their indebtedness to John Locke. Voltaire spent some time in England and was deeply impressed by English empiricism. But before turning to Locke it is necessary that we first take note of another figure, who can be called the most thoroughgoing empiricist in the history of English thought—David Hume (1711-1776).

Hume held the same position in the Locke-Berkeley-Hume "triumvirate" that John Stuart Mill occupied among the three great minds of utilitarianism. Each clarified and advanced the arguments of his predecessors and each brought a movement to its culmination. John Locke had argued that all we can know is our "ideas," and these are derived completely from our experience. At the same time, Locke accepted unquestioningly the Cartesian dualism of mind and matter. Berkeley cancelled out material substance. He maintained that ideas are our only source of knowledge, for, said he, ideas are spiritual, and therefore the only true substance in the world must be spiritual substance. Hume took the next step. He, like his predecessors, agreed that ideas are the only source of knowledge, but he used the same argument against spiritual substance that Berkeley had used against material substance. Spiritual substance, Hume argued, is not an object of knowledge; therefore let us stick to that which in our experience we know to be real; namely, our ideas, which are images or copies of impressions. These, he said, might be either outer impressions (sensations) or inner impressions (feelings and emotions). The difference between them is to be found simply in the "degrees of force and liveliness with which they strike upon the mind and make their way into our thought or consciousness." Under the name *impressions* he included all "sensations, passions and emotions as they make their first appearance in the soul." By *ideas* he meant "faint images of those in thinking or reasoning," which he recognized as either simple or built up by association and imagination into complex forms, constituting the one and only reality. Consequently, Hume denied the reality of the self; it is not an idea to be represented by definite image. In one of the most famous passages in his *Treatise on Human Nature* he said:

> For my part, when I enter most intimately into what I call *myself* I always stumble on some particular perception or other, of heat or cold, light or shade, love or hatred, pain or pleasure. I never can catch myself at any time without a perception, and never can observe anything but the perception.[16]

Another famous section of Hume's work is his attack upon the notion of cause and effect, and here again we find ground for his high rank as an empiricist:

> When we look about us towards external objects, and consider the operation of causes, we are never able, in a single instance, to discover any power or necessary connexion; any

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[16] David Hume, *Treatise on Human Nature,* I, iv, 6.

> quality which binds the effect to the cause, and renders the one an infallible consequence of the other. We only find, that the one does actually, in fact, follow the other. . . .[17]
>
> The first time a man saw the communication of motion by impulse, as by the shock of two billiard balls, he could not pronounce that the one event was *connected;* but only that it was conjoined with the other. After he has observed several instances of this nature, he then pronounces them to be *connected*. . . . Similar objects are always conjoined with similar. Of this we have experience. Suitably to this experience, therefore, we may define a cause to be an *object, followed by another, and where all the objects similar to the first are followed by objects similar to the second.*[18]

In other words, natural phenomena can be predicted only through human experience. A man knows that if he loosens his grasp on a stone held in his hand it will drop to the ground rather than fly into space, but his only basis for knowing this is his experience; he cannot predict the manner of nature's performance in this or any other case on a purely rational basis.

> The scenes of the universe are continually shifting, and one object follows another in uninterrupted succession; but the power of force which actuates the whole machine, is entirely concealed from us, and never discovers itself in any of the sensible qualities of body.[19]

Again in his treatment of ethics Hume foreshadows the whole utilitarian movement. One of the sections of his *Enquiry Concerning the Principles of Morals* is entitled "Why Utility Pleases." And Hume repudiates the argument of Hobbes that man always acts from selfish motives.

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[17] David Hume, *An Enquiry Concerning Human Understanding,* ed. by L. A. Selby-Bigge, second edition (Oxford: Clarendon Press, 1927), VII, i, 50.

[18] *Ibid.,* VII, ii, 59, 60.

[19] An interesting controversy is going on in modern scientific literature on this same point. See Paul R. Heyl, "The Skeptical Physicist," *Scientific Monthly,* XLVI (1938), No. 3, 225-29.

> Usefulness is agreeable, and engages our approbation. This is a matter of fact, confirmed by daily observation. But, *useful?* For what? For somebody's interest, surely. Whose interest then? Not our own only: For our approbation frequently extends farther. . . . Thus, in whatever light we take this subject, the merit, ascribed to the social virtues, appears still uniform, and arises chiefly from that regard, which the natural sentiment of benevolence engages us to pay to the interests of mankind and society.[20]

In this kind of ethics there are foreshadowings of both Bentham and Mill and also of John Dewey. Moreover, Dewey would understand and applaud the motives which led Hume to write the Appendix to the First Book of the *Treatise,* one of the most remarkable documents in philosophical literature. In it the writer admits his failure in handling the question of personal identity which he had tried to abolish.[21] ''I find myself involved in such a labyrinth,'' he says, ''that, I must confess, I neither know how to correct my former opinions, nor how to render them consistent.'' Such a statement calls for rare honesty, and while Hume gave it as one more bit of evidence in support of his own ''scepticism,'' he was here taking the position of the modern scientist who abides by the final results of his investigation, no matter how disappointing they may be to him personally.

JOHN LOCKE

The great founder of the empirical school in England was John Locke (1632-1704). It should be remembered that just as the pragmatic philosophy of William James was a reaction against the rationalistic idealism of Josiah Royce and his predecessors, so the empirical philosophy of John Locke was a reaction against the rationalistic epistemology of Descartes, and the scholastic rationalism of the whole period of the Middle Ages. Locke, like Dewey, was not metaphysical in his thinking; his central theme was man and man's ways of knowing; but, unlike Dewey, he made certain assumptions regarding the existence of God and the dualism of mind and matter which he never examined critically.

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[20] Hume, *An Enquiry Concerning the Principles of Morals,* ed. by L. A. Selby-Bigge, second edition (Oxford: Clarindon Press, 1927), V, i, 177; V, ii, 187.

[21] See quotation above, p. 348.

Mind starts, he declared, with elementary ideas, supplied first through the senses; then by processes of combination, association and abstraction complex ideas are built up. We have seen that Hume borrowed this same basic concept, and accepting it as the final and only path to knowledge, he made it the cornerstone of his skepticism. Even here, however, Locke had anticipated him in part, for he came to the conclusion that:

> Since the mind, in all its thoughts and reasonings, hath no other immediate object but its own ideas, which it alone does or can contemplate, it is evident that our knowledge is only conversant about them.[22]

But Locke, like Descartes, felt it necessary to endow the mind with direct intuitive knowledge both of the self and of God.

Locke came from a Puritan family, and both the thrifty "hardheadedness" and the piety of that kind of outlook can be found in his writing, though Locke was not a literalist as so many of the later Puritans were. From his Oxford days when he rebelled against the fine-spun controversies of "depraved Aristotelianism" down through his contact with public affairs as a result of his close friendship with the Earl of Shaftesbury and his exile in Holland, to the time when he wrote his *Thoughts on Education*, he was consistently concerned with the solution of practical problems. Even the *Essay Concerning Human Understanding* came to be written as a result of a discussion in which "five or six friends meeting in my chamber, and discoursing on a subject very remote from this, found themselves quickly at a stand by the difficulties that rose on every side." And in the *Essay* he comes "to an examination of the powers of the human mind in order primarily to get a weapon against political superstitions, traditional dogmas, empty words divorced from things, and a sentimental and unreasoning enthusiasm.'' Locke is interested in means, methods, the direction of activities; and facts are more important than abstractions.

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[22] John Locke, *Essay Concerning Human Understanding*, IV, i, 1.

Ethically, Locke has sometimes been regarded as the source of English utilitarianism, for he thought of good and evil as ''nothing but pleasure or pain, or that which occasions or procures pleasure or pain to us.'' He made a close connection, as did the utilitarians, between the whole social state and the process of law-making. ''*Morally good and evil,* then, is only the conformity or disagreement of our voluntary actions to some law, whereby good and evil is drawn on us from the will and power of the lawmaker.'' He definitely advocated that we make ''reason our last judge and guide in everything''; and he was suspicious of ''sentimental enthusiasm.'' Consequently he would undoubtedly have understood and approved the utilitarian phrase ''enlightened benevolence.''

Finally, Locke's thinking was deeply influenced by the science of his own time. He was a member of the Royal Society, became a physician—apparently more for the sake of the opportunity it afforded to gain a direct knowledge of science than for the sake of practicing—and was well acquainted with some of the great mathematical and scientific research going on about him. He looked with greatest respect upon ''such masters as the great Huygenius, and the incomparable Mr. Newton,'' and he never questioned the propriety or the validity of the scientific method.

FRANCIS BACON

But such an attitude was well established in England before Locke's time. The statement has been made that the fundamental principle of Locke's philosophy had been formulated seventy years earlier in the first aphorism of Francis Bacon's *Novum Organum.* It read:

> Man, as the minister and interpreter of nature, does and understands as much as his observations on the order of nature, either with regard to things or the mind, permit him, and neither knows or is capable of more.

Francis Bacon did not construct an integrated, systematic philosophy, nor did he show great respect for mathematics, nor did he have complete mastery of the scientific knowledge of his own time; but he led a brilliant offensive against scholasticism and expounded persistently and eloquently the values of the inductive method. As Randall[23] has pointed out, the Spanish reformer, Vives, the great Leonardo, and above all, Galileo, had anticipated or formulated the method previously, but it was Bacon who proclaimed it to the world in such a fashion that it could not be ignored.

The new goal of science set up by these rebels against scholasticism was ''useful knowledge,'' meaning knowledge that men could employ for their own happiness and improvement. In the older schools knowledge had been regarded as something divine, to be approached only by means of the reason; the new school gloried in its practicality. ''We have but one simple method of delivering our sentiments,'' says Bacon, ''namely, we must bring men to particulars and their regular series and order, and they must for a while renounce their notions, and begin to form an acquaintance with things.''[24] Again: ''Shall he [man] not as well discern the riches of nature's warehouse as the beauty of her shop? Is truth ever barren? Shall he not be able thereby to produce worthy effects, and to endow the life of man with infinite commodities?''[25] The emphasis here is upon *things,* and while Bacon reiterated his position that this method led to the discovery of truth in a new way, the reader is always aware that he is thinking of applications to be made in men's daily lives. The emphasis upon commodities and the practical brings to mind the fact that *bourgeois* influence was probably here at work, as in the case of Locke. Bacon's mother was a devout adherent of the Puritan form of religion; and Bacon attended Trinity College at Cambridge, from which so many of the early eminent Puritan divines came to America in the first part of the next century. It is part of that strain of tough-minded matter-of-factness that runs through English and American thought and renews itself in Dewey's homely sentence: "An ounce of experience is better than a ton of theory simply because it is only in experience that any theory has vital and verifiable significance."

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[23] J. H. Randall, Jr., *The Making of the Modern Mind* (Boston and New York: Houghton Mifflin Co., 1926), pp. 221-24.

[24] Francis Bacon, *Novum Organum,* I, Aphorism 36.

[25] Francis Bacon, *Letters,* I, 123.

EARLIER FORMS OF EMPIRICISM

But it is part of a train of thought that can be traced back in England itself three hundred years preceding Francis Bacon to William of Occam, a churchman whose philosophy was a species of nominalism—emphasis upon individuals or individual facts as reality, in opposition to universal realities—and to Roger Bacon. Having become persuaded of the merits of mathematical and experimental methods, he violently attacked scholasticism and some of its principal defenders. Roger Bacon, without doubt, can be called one of the great men of the thirteenth century and one of the true forerunners of the scientific age. However, that which makes his work most significant was the result of his contact with Arabic scholarship.[26] There Bacon found the experimental method in such an advanced stage that the writings of the Church fathers appeared by contrast like the prattling of credulous children.

It is significant that the source of this scholarship was in Alexandria, where Greek learning mingled with the more practical arts of the Egyptians. Both the Egyptians and the Romans were driven to the sciences in order to solve their practical problems. Both were originally agricultural peoples with thoroughly practical outlook. In conducting water through irrigation ditches or aqueducts it was necessary to have some knowledge of trigonometry and surveying. In hewing and erecting slabs and pillars of stone into various structures it was necessary to have recourse to mechanics, and, thence, to some of the laws of physics. In order to live comfortably it was necessary to know some of the remedies for various ailments, and therefore, something about physiology, anatomy, diet, and chemistry. In order to construct tools and implements it was necessary to know something of metallurgy and, again, of chemistry. Thus there was a tendency among these peoples not only to collect these facts, but to express themselves through their application.[27]

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[26] See Chapter V, p. 140.

And in this sense, the Egyptians were, as a people, more pragmatic than the Greeks. Among the latter the name of Aristotle is sometimes cited as belonging to the pragmatists, but this is on account of only one phase of his thinking. Aristotle was the great Greek liberal, and while, in contrast with Plato, he was more scientifically-minded, more the empiricist, he was also, throughout, the metaphysician.

Three other Greek names may be recalled in this connection—Euclid,[28] with his genius for mathematics, Archimedes, with his knowledge of mechanics, and Protagoras, with his philosophy of "humanism." Protagoras, a contemporary of Socrates, can be regarded as a very early exponent of many of the positions and attitudes of the modern scientific humanist or pragmatist. He was practically-minded; he was the first Sophist to accept money for his teaching. He emphasized facts rather than theory. He argued for less attention to metaphysics and more attention to life situations. He was concerned, first of all, with man and a human philosophy. He was a Heraclitean, believing all things to be in constant flux. He was a sensationalist, teaching that the senses are the only source of knowledge. He was an agnostic; there is no possible certainty, he said, as to reality. He was a relativist; every human being, he declared, sees that which is momentarily true and true only for him. Consequently, he would ignore that great unknown, concentrate upon the here and now and upon ways of adapting oneself to ever recurrent changes. Thus, it is obvious that the pragmatic approach and the attitudes that accompany it now are as old as Western civilization.

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[27] Their mechanical skill is well exemplified in an excerpt from *Ra-mose and Hat-nufer* by Lansing and Hayes, *Scientific American,* CLVII (Dec. 1937), 332:

> The removal of the lid required considerable ingenuity, for an intricate locking device, which left no clue as to its nature or mechanics on the exterior of the coffin, held the cover and the coffin firmly clamped together. Four stout tenons shaped like inverted wedges, descending from the underside of the rim of the lid could be removed from specially shaped mortises in the rim of the coffin only by first sliding the whole lid horizontally in the direction of head end. To prevent this there was a wooden tumbler in the head end of the lid which, when the cover was originally lowered onto the coffin and subsequently slid into place, swung of its own weight down into a transverse mortise in the rim of the box and effectively checked any longitudinal movement of the lid.

[28] See Chapter V, p. 137.

IDEALISM

We have seen that pragmatism expresses itself positively in an advocacy of naturalism, present social values, and the application of intelligence through science for human benefit. It has also its negative side, which develops not so much out of its preoccupation with its own positivism (in much the same way as the active scientist neither affirms nor denies ontological truth) as from an overwhelming concern with the contemporaneous.

Now idealism is positive in exactly that area where naturalism, pragmatism, and positivism are either non-committal or ready with denials. As Clifford Barrett puts it:

> On one side of the "great divide in philosophy," are those who regard human experiences of value as resting back upon limited value-systems, which themselves occur in an order of nature over which values hold no regulative power. For them,

> values are human creations, arising out of physiological processes, or emerging from the valueless. On the other side are those who look upon human experiences of the values as arising out of man's participation in the order of the universe, of which he is a part. *Values are not his creation, but his discovery.* He is aware of values because he has the capacity to realize in intelligent life, the order of universal nature. . . . It is in the significance which they attribute to values in human knowledge that Pragmatism and Idealism draw closest together. In their metaphysical assumptions as to the nature of these values, they are separated.[29]

Idealism as a philosophy, like pragmatism, has had a long history. It has never retreated from its insistence upon the primacy of mind (and, therefore, purpose—however inscrutable) in the universe, but its interpretations of this mind have varied with both the personal point of view of the philosopher and the current views of mind. Today, it is significant that Alfred Whitehead has been classified as both a realist and an idealist. His philosophy of ''organism'' is probably susceptible of either interpretation; on the other hand, it should be remembered that current scientific definitions of mind are much more objective and naturalistic than in the past, and from this point of view Whitehead is attempting a synthesis that keeps idealism still in the running. It is significant, too, to find that during the nineteenth century, while the old ''faculty psychology'' was still in vogue, each of the three commonly accepted aspects of mind received idealistic treatment in philosophy. This is illustrated in German thinking, where Hegel, Schopenhauer, and Schelling respectively stressed the reason, the will, and feeling or intuition. Previous to this, idealism, following the great Platonic tradition, tended to place emphasis upon the rational. And because of this tradition, which has had a close affiliation with Christianity, and because of its opposition to materialism, idealism, while it remains a philosophy, by reason of its intellectual and systematic pursuit of metaphysical questions, has a closer relationship with both religion and intuition than has pragmatism. The only ''mind'' that man knows at first hand is his own, and inevitably, some of the qualities he associates with it will be personal qualities. Again, if personality be thus given so great a significance, it must follow that those values which men have regarded as highest will likewise enter into any idealistic ''universal.'' Hence, it is not surprising that idealism attracts especially that type of mind which is attempting to reconcile a background of religious experience with scientific and intellectual approaches to nature, nor that, historically,

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[29] Clifford Barrett (ed.), *Contemporary Idealism in America* (New York: The Macmillan Co., 1932), p. 18 (Italics not in the original.)

> idealism has often appeared as a philosophical outgrowth of religion. Thus in India, Brahmanism and Vedantism are forms of idealism. In China, Lao Tze's philosophy, built on the ancient Chinese Tao doctrine, is akin to idealism. Northern Buddhism became an idealism in its metaphysics and in this form spread over China and Japan. Judaism (with the aid of the immortal Greeks) has given birth to Philo and Maimonides; Christianity, likewise with Greek aid, to Augustine, Abelard, Anselm, Thomas Aquinas, Duns Scotus, and many others—some of whom wavered, like Plato and Aristotle before them, between dualism (or pluralism) and idealism.[30]

But this very tendency to find common ground with religion has brought criticism upon it from the modern scientifically-minded philosopher. Just as the biology that espouses the doctrine of vitalism has sometimes been said to involve the attitude of the ''quitter,'' by the more materialistic scientist, so religion has been called ''in essence a short-cut to satisfaction.'' Moreover, religion is full of resignation; and this is too likely, says the pragmatist, to carry over into social situations. Instead of going out to do battle with the evils of one's social environment, the religionist, concerned with personal salvation, passively accepts those evils. The pragmatist would change conditions for the benefit of the whole social group and succeeding generations.

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[30] W. E. Hocking, *Types of Philosophy* (New York: C. Scribner's Sons, 1929), pp. 249-50.

JOSIAH ROYCE

Of those who have propounded the philosophy of idealism the most prominent American was a contemporary of William James—Josiah Royce. While Royce had no connection with any form of institutional orthodoxy, he was undoubtedly deeply religious. At the same time he was a profound scholar, and throughout a lifetime of prodigious labor attacked some of the major problems of philosophy. The versatility of his work is attested by the fact that he is regarded as a representative of many phases of idealism by various critics. There was a sense in which Royce was compelled to be ''objective''; he lived in a period when science and mathematics had become dominant in men's thinking, and he could not blink the current agnosticism.

The real world, he said, from which our experiences are derived is ''a great *X*,'' known to us only in a few phenomena that happen to fall within the radius of our powers of knowing. He takes this position because, as he explains it, the world of sense-phenomena is a cause-and-effect world, a ''show-world,'' but the absolute Self is not to be so expressed. This must be reckoned with in terms of ideas, if we are to regard the universe as comprehensible. Unless one so conceives it, the real world, ''in so far as it is real and outer'' becomes ''an inscrutable *X*, an absolute mystery.''

It is worth noting, also, that Royce called his theory absolute voluntarism, rather than absolute idealism; he had been impressed by the pragmatism of Peirce. He was ready to admit the importance of change and of struggle, hence his system included a certain flexibility and a place for purpose, but always to be discovered or realized in terms of rational meaning.

EARLIER AMERICAN IDEALISTS

In the history of American idealism considerable space has usually been devoted to the role of William T. Harris, who played a large part in making Hegel's philosophy known in America. However, he contributed nothing original, and will doubtless be remembered mainly for his work in public education. The next American figure to be taken seriously into account is that of Emerson.

It is not easy to appraise the position of Ralph Waldo Emerson in American life. He was both transcendentalist and practical reformer. For Emerson, while he talked in idealistic and mystical terms, also spoke, upon occasion, most directly and specifically concerning the controversial issues of his time.[31] He was without fear; he did not hesitate to attack subjects that have developed bigotry in men from earliest times, yet he was never regarded as a fanatic. In a sense he was always coldly intellectual, though his approach to problems was not by way of logic. He spoke in terms of human values, and his pronouncements came intuitively. His method and his mental life were very much those of the poet. ''He saw by flashes.''

In consequence, Emerson's idealism had a highly spiritual quality, much more closely related to that of Plato than that of Hegel. It was called transcendentalism. It derived from German idealism, but by way of romanticism; hence, in all its expression we find the precedence of the poetic over the reason. System is not regarded as a value; even consistency, according to Emerson, is to be regarded as a ''hobgoblin of little minds.'' And since its method is that of spiritual insight, transcendentalism ascribes a great dignity to the human being and the individual soul. Emerson was deeply influenced by Swedenborg and by the ancient books of India, hence certain phases of his thinking are distinctly pantheistic. But he insisted, again and again, upon man's right and duty to approach the source of inspiration and to develop his own independent interpretations of life.

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[31] See Chapter X, p. 297.

In a way, this accorded with the spirit of that period of American history with which it coincided. The American in the second quarter of the nineteenth century began to be aware of the potentialities of his own country; the opening up of the West and the beginnings of the Industrial Revolution made romanticists of all Americans. Emerson plainly perceived the naive extravagances of his fellow countrymen, but he felt, too, that this awkward ebullience and brash energy foreshadowed the beginnings of an original American culture, for the first time divorced from the influence of an older European civilization. The transcendental manner of expressing this romanticism was an avowal of the divine qualities of mankind, but Emerson repeatedly gave voice to a fervid Americanism.

> The world is nothing, the man is all; in yourself is the law of all nature, and you know not yet how a globule of sap ascends; in yourself slumbers the whole of Reason; it is for you to know all, it is for you to dare all. Mr. President and Gentlemen, this confidence in the unsearched insight of man belongs, by all motives, by all prophecy, by all preparation, to the American Scholar. . . . We will walk on our own feet; we will speak our own minds. . . . A nation of men will for the first time exist, because each believes himself inspired by the Divine Soul which also inspires all men.[32]

Naturally, Emerson's approach to the world had its limitations. He knew little about physical science, cared little about logic. He was not, strictly speaking, a philosopher; nevertheless, Emerson's influence upon the culture of America has been profound, and the implications of his thought have led preponderantly toward idealism.

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[32] From the *American Scholar,* John D. Morris and Co. Edition of Emerson's works, Vol. III, pp. 108-10. (Phila., 1906.)

HEGEL

The philosophy of George Wilhelm Friedrich Hegel (1770-1831), for which John Dewey has expressed profound admiration, was the culmination of a movement springing from the work of Kant and carried on by Fichte and Schelling. It came to be known as absolute idealism. Hegel rested his doctrine upon two fundamental principles; first, the world as unity must be conceived in terms of reason, and second, a rational world is full of contradictions. Kant had said the reason could never know the real world or the supernatural, but Hegel felt that because the very nature of reality was rational, therefore the human understanding could pursue it. However, this was not to say that any particular and isolated moment contains the entire truth; these moments are, by themselves, confusing; the truth is to be found in the Absolute, the whole that is unfolding itself, moment by moment, in human experience. Hence the idealism of Hegel is pantheistic; it is logical, and it is deeply concerned with history. Any form of life, carrying in itself even a moment of divine truth, has significance, for it is a step in the development of history. Reason is an impersonal, logical, cosmic process, which while it creates what appear to man as contradictions and inconsistencies, in the end solves them. That is, there is in this philosopher's thinking a distinct sense of the dynamic, and this helped later toward the scientific development of the doctrine of evolution, though Hegel himself was not scientifically-minded. Logical idealism, such as Hegel's, is essentially optimistic, and by reason of its *a priori* approach to problems, it may be irritatingly grandiose to the realistic thinker. It is true that Hegel dealt with a wide range of subjects—family, property, government, art, religion, history, and so on—but his method always remained dialectical, setting out to prove, by logic, the assumptions with which he began. Its opposition to the scientific method, therefore, is obvious.

SCHOPENHAUER AND SCHELLING

Of two other German idealists previously mentioned, one has had much greater influence in the United States than the other. Arthur Schopenhauer (1788-1860) was a pessimist. Deeply read in Oriental as well as in Western thought, he conceived of reality at its heart as blind, unreasoning will—pitiless, ruthless, and irresistible. The law of the jungle is its true exemplification. To live most successfully is to escape—by way of art or of morality—from this terrible driving force; hence the largely hopeless outlook for all except the most gifted.

It hardly needs statement that such an attitude and interpretation has not been congenial to the romanticism of the American. In the past the American has faced physical and social conditions that stimulated fresh hope even in times of difficulty; hence the philosophy of Schelling rather than that of Schopenhauer could become directly antecedent to Emersonian transcendentalism. Schelling (1775-1854) regarded all nature, including man, as expressions of the same dynamic entity, with matter the lowest and man the highest forms. He was a romanticist, deeply influenced by the German poets, Goethe and Schiller. Instead of pitiless power at the center of his philosophy, we find a growing emphasis upon the beautiful, arrived at intuitively as in art, as the most nearly real. It is not strange, therefore, that Schelling should also turn to the religious implications of his doctrine as he grew older.

BERKELEY

It may be said that Hegel's idealism was objective. He postulated a rational cosmos of which man's experience is a part; he included man, but he did not begin with man. The type of idealism known as subjective is usually associated most completely with the work of the Irishman, George Berkeley (1685-1753). It is evident from a glance at the period of his life that it overlapped that of John Locke. His philosophy, in fact, was largely the result of the impact of Locke's thinking upon him, though he was conversant with the scientific and mathematical trends of the times. Berkeley entered philosophy openly and fervently from religious motives. He was concerned about certain tendencies in empiricism and science which he felt might lead directly away from religion; and he set about formulating a system of thought to offset these influences. Nevertheless, he did so in a thoroughly intellectual manner and in such brilliant terms, indeed, that however much thinkers have disagreed with him, they have seldom failed to acknowledge their admiration for his ability as a thinker.

Reference has already been made to the relationship among the thought systems of Locke, Berkeley, and Hume.[33] Berkeley was the second in the group and, while he was an idealist, he was also true to the English philosophical tradition that stressed the practical, the epistemological, and the psychological. First off, he hoped to make his philosophy a profoundly beneficial influence in the world by proving the omnipresence of God, but, in addition, he felt that it might render the study of the natural sciences and mathematics more useful. In the second place, he started, as Locke had started, with experience and studied the nature of human knowledge; and, in the third place, his method of dealing with facts of experience was analytical and objective so far as the introspective methods of his day permitted.

Berkeley has been called "the first modern philosopher to discover the importance of the thinking subject in knowledge." Up to his time the assumption had been that the mind's working depends upon the outside world; Berkeley reversed this assumption and argued that the so-called outside world depends for its existence upon the mind. He followed Locke in regarding the object of thought as an idea, but denied the difference in substance between external and internal. That is, he insisted, there is only one basic substance—the spiritual. As he explained it:

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[33] See *ante,* p. 337.

> We perceive a continual succession of ideas; some are anew excited, others are changed or totally disappear. There is, therefore, *some* cause of these ideas, whereon they depend, and which produces and changes them. That this cause cannot be any quality or idea or combination of *ideas,* is clear from the preceding section. It must therefore be a *substance;* but it has been shown that there is no corporeal or material substance; it remains therefore that the cause of ideas is an incorporeal active substance or spirit.[34]

And this spirit he identifies with the Author of nature, a Divine Being, God. Berkeley, quite differently from Locke, produced some of his most original work as a young man, early concentrating upon the notion that to be is to be perceived—*esse est percipi.* But consistently, from beginning to end, his argument leads always to the spiritual nature of the idea as a step toward the mind of God.

IDEALISM IN THE MIDDLE AGES

It is evident that the closer we approach the Middle Ages the less likely we are to find philosophy free of theological bias. One of the principal conflicts of the time was that between the supporters of nominalism and the so-called realists who led the way (though unwittingly) respectively toward scientific thought and pantheism—both of which were thoroughly distasteful to the Church. However, some of the most independent thinking in these fields took place at the beginning of the period of scholasticism before the Church became aware of some of its bearings; and in this period—the ninth century—John Scotus Erigena was unquestionably the outstanding thinker. Erigena argued that the one all-containing and the true universal is God, but that the best approach to the understanding of God is through the intellect; the biblical account of creation, for instance, is allegorical, and has to be interpreted—an interesting point of view in contrast to the literalism that later developed. Erigena's philosophy was derived from Neo-Platonism and Platonism; and while he occupies an important place in the history of idealism, it will be more worth while to go back to his sources than to elaborate upon his own thinking.

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[34] George Berkeley, *A Treatise Concerning the Principles of Human Knowledge* (Chicago: The Open Court Publishing Co., 1907), I, 26.

PLATONISM

The great fountain-head of all idealistic thinking, of course, is Plato, but it must not be forgotten that his teaching descended through two main channels. One of these was Christianity; the other, Neo-Platonism. With the Platonic content of the former is to be associated especially the influence of two men—Origen and Saint Augustine; and, in similar manner, the work of Philo and Plotinus is outstanding in Neo-Platonism.

The greatest Greek figure in Neo-Platonism was Plotinus (204-269 A.D.). Both Christianity and Neo-Platonism sought to combine Greek intellectualism with the mysticism of the East, and Plotinus, educated at Alexandria, having traveled in the Orient, and having made a special study of Persian religion, was peculiarly fitted for this task. By some critics he has been regarded as the greatest pagan religious thinker of the Christian Era. His orientalism led, naturally, to pantheism, but his Greek heritage impelled him to a dynamic interpretation of it, not in terms of time, but of value. Plotinus' work was disorganized and incomplete as it came down to posterity, but many of his concepts have had permanent influence, particularly among religious mystics.

The greatest Christian figure of this period was Aurelius Augustine (354-430 A.D.), who was converted to Christianity as a mature man. He had a brilliant mind, and knew the thinking of his times rather comprehensively, but was influenced especially by the writings of Plato, Saint Paul and Plotinus. As a church official, Augustine became, naturally, increasingly conservative and institutionally-minded as he grew older. On the other hand, he stressed the importance of the self and the discovery of reality through self-knowledge in a manner that foreshadowed the thinking of modern times from Descartes on. This was all done, however, in terms of religion. God became not merely a judge, but one of the two parties in a spiritual relationship in which it was necessary that man, also, should figure. At the same time, the spiritual background of the universe in God was the fundamental tenet upon which all other thinking was posited. Augustine taught a monotheism in which he emphasized the highly spiritual quality of God, but ascribed to Him a nature with which man was capable of having relationship. Augustine vigorously fought the implications of Pelagianism,[35] but the influence of Platonism and Neo-Platonism ran throughout his work.

PLATO

Aristocles (427 ?-347 B.C.), nicknamed Plato on account of his broad shoulders—pupil of Socrates, teacher of Aristotle—has exerted a profound influence upon thinking men throughout the Western world. Many of his concepts have become a part of the everyday thought of all classes of men who know nothing of their origin. In the early Church the work of Aristotle had little effect, whereas the influence of the thinking of Plato permeated it. We have seen that this was exerted both directly and indirectly. Concepts of spirituality, the good life, immortality, the importance of human relationships, the eternal nature of the Idea all received shaping at his hand. Plato was very much the poet, something of the mystic, and deeply concerned about human values. At the same time he believed the only dependable approach to truth to be by way of the reason.

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[35] See Chapter XI, p. 319.

> That which is apprehended by intelligence and reason is always in the same state; but that which is conceived by opinion with the help of sensation and without reason, is always in a process of becoming and perishing and never really is.[36]

Largely by this emphasis Platonism is distinguished from Neo-Platonism and early Christianity.

Plato, the idealist, is discovered most significantly in his concept of the *ideai,* meaning ''patterns'' or ''forces,'' and closely related to our modern word *concepts.* But in the Platonic sense they are in no wise dependent upon the knower for their existence. That is, *ideai* are independent of human perception; they are eternal, ultimate, changeless. They are the final truths sought by science, the final values of ethics. But one fundamental in this doctrine must never be lost sight of. Knowledge of this degree of purity cannot be apprehended by sense-perception. Here is the original parting of the ways for idealist and empiricist. The empiricist declares the findings of the senses to be ''real'' and ''basic''; ideas grow by association and organization of these reports. The Platonist insists that *ideai* are always beyond this changing flux of the senses; they are never fully comprehended by human mentality, but man may catch glimpses of them as he draws near the realms of pure thought. Consequently, Plato placed great stress upon the concepts of mathematics, for here, he felt, we can approach the purely intellectual; geometric forms retain the same properties quite independently of time and place. This explains how a new learner of geometry can be brought to see for himself the truth of a proposition without actually being ''taught'' or ''told.'' He goes from the sense-perception to the truth suggested by that perception; truth emerges inevitably from such a pursuit, for it is always and will always remain the same.

> And do you not know also that although they [students of geometry, arithmetic, etc.] make use of the visible forms and reason about them, they are thinking not of these but of the

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[36] Plato, *Timaeus,* 28. (Jowett translation.)

> ideals which they resemble; not of the figures which they draw, but of the absolute squares and the absolute diameter and so on . . . ?[37]

Plato depends upon the same method in his approach to the problem of good and evil.[38] Man is always in search of that which he *thinks* is good, but discernment of the really good depends upon intellectual insight—right judgment. Plato is not ascetic to the point of opposing all pleasure. As A. E. Taylor puts it:

> He is fully prepared to argue the point that, even by the rules of the calculus of pleasure and pain, if you formulate the rules correctly and work the sum right, the life of the man who puts the soul first, the body second and "fortune" only third, will prove to be the most truly agreeable as well as the most noble.[39]

Nevertheless, philosophic or intellectual insight has only one unvarying answer to the question as to what is the highest good; namely, virtue and wisdom. The point is consistently carried out in the Platonic *Republic.* The philosopher-kings, the highest of the three classes of citizens, are chosen because through long years of a gruelling regime they have proved themselves the most noble, the most disinterested, the most completely devoted to the welfare of the social group. Government in the hands of such a group would mean a government founded upon principle—ultimate principle; any law emanating from such a group could rightfully demand respect because of its assured conformity to the moral law.

Whoever holds that what would be "morally" reprehensible for the individual person may be "politically" admirable when done by the official representatives of the State, has broken with the whole view of the reasons for civic loyalty and political subjection, characteristic of both Plato and

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[37] Plato, *Republic,* VI, 510. (Jowett translation.)

[38] See *Philebus,* the opening arguments.

[39] Alfred Edward Taylor, *Platonism and Its Influence* (Boston: The Marshall Jones Co., 1924), p. 62.

Aristotle. . . . it is not from Greek philosophy but from the practice of Roman politicians of the evil age after the second Punic war that modern times have borrowed the doctrines of "empire" as an end in itself and of "reasons of state" as superseding regard for right and wrong.[40]

Undoubtedly idealism can be traced beyond Plato, particularly into the Orient, but for us in the Western world the trains of this kind of thought lead so directly and so completely to Plato that we need not, for present purposes, go further. Thus our quest for the sources of the ways of thought found on opposite sides of that "philosophical divide" effectively separating men into two great ideological camps—empiricism or pragmatism on the one side, idealism on the other—has carried us, as might be expected, back to Greek times. Western thought has been divided in this manner from the beginnings of men's attacks upon the central problems of the nature of life and the universe. From Protagoras to John Dewey, from Plato to Josiah Royce the challenge of the truth and the manner of its discovery have elicited response from the great, and throughout their long history the answers have fallen into curiously consistent groups. It is not strange, therefore, that lines of thinking so long and so potent should still exert profound influence upon the educational attitudes of today.

Reading List

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Randall, J. H., Jr. *The Making of the Modern Mind* (Boston and New York: Houghton Mifflin, 1926). Chapter 9.

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Townsend, H. G. *Philosophical Ideas in the United States* (New York and Cincinnati: American Book Co., 1934). Chapters 9-10.

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[40] *Ibid.,* pp. 68-69.

XIII. LIBERALISM AND LITERALISM

GEORGE SOULE dedicates his volume entitled *The Future of Liberty* to "all those obscure persons who have given their best to *an enlargement of human experience*, and particularly to those who have suffered in defense of liberty." There is one phrase here (italicized by the present writer) that comes close to the heart of all liberalism, and is distinctive because of its positive emphasis. Attention is commonly directed to the liberal's defense of an idea or his battle against some intrenched form or regime, but such activities are always the reflex of the vision of an enlarged human experience. The liberal is not simply the reformer or the imaginative idealist; he is concerned with freeing men from certain bonds that fix their acting through their thinking, and he is concerned with the integration of the new with the old.

Thus the liberal has made his appearance from the beginnings of civilization, and because of its very breadth of connotation the word "liberalism" has come to be applied, particularly in the last century, to many fields. L. T. Hobhouse[1] enumerates nine different categories of liberalism which he builds up through differentiation of various historical struggles, but even thus he does not include all the meanings to which the term has been applied. As C. R. Skinner puts it:

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[1] L. T. Hobhouse, *Liberalism* (New York: Henry Holt and Co., 1911), Chapter II.

> To the classical economist it means *laissez faire,* or personal initiative in business. To the theologian it means a particular branch of the church, which includes such denominations as Unitarian, Universalist, some Congregationalists, Quakers. To the politician it means a party which tries to steer along the middle of the road, adhering to moderate and progressive reform. To the educator it means a system of mental training founded on broad, classical disciplines, rather than upon a narrow, highly specialized technology. To those suffering from minority exploitation, as the Negro or Jew, it connotes fair treatment and the right to self-respect. To the solicitor for charitable subscriptions it means generosity. To the Marxian it means a weak and wobbly bourgeois program which offers nothing but amiable futility. To the fundamentalist it means destructive rationalism. To be a liberal in some communities means to be sent to prison, or even the gallows; whereas in other communities it means being looked up to as wise, well-balanced, and civilized.[2]

Thus, while the liberal often stands out as a lone individual, the broad outlines of his doctrine may generate social movements that tend to repeat themselves many times under similar circumstances. Liberalism may be a romantic thing and allied to visions of progress as with a Condorcet or a Shelley or a Godwin; it may spring from ''inner vision'' as with the Hebrew prophets; it may be closely reasoned logic such as is found in John Stuart Mill's masterpiece; it may find fervent expression in the presence of conditions felt to be imminently dangerous, as in C. E. M. Joad's recent *Liberty Today* or George Soule's *The Future of Liberty;* or it may be approached with the precision of cold scientific analysis, such as that found in certain sections of *Recent Social Trends,* the survey authorized by the Federal Government under the administration of President Hoover. However, it can probably be said that in the minds of most liberals critical intelligence plays or should play a larger part than any other factor.

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[2] C. R. Skinner, *Liberalism Faces the Future* (New York: The Macmillan Co., 1937), p. 2.

This follows naturally from the fact that in so many of the conflicts of the past few centuries the advocates of free intelligence have furnished one of the contesting parties. But it follows also from the fact that the liberal is one whose circle of thinking is an expanding one, that the first prerequisite of such an attitude is a considerable congeniality with ideas in general. The liberal *likes* ideas, and this presupposes, again, no mean level of intelligence—carrying with it social and educational implications of profound significance.

The liberal, by the very nature of his own outlook, takes it for granted that his argument will elicit response by its cogency. And either he will assume that all men are reasonable, or he will appeal only to certain classes. Joad, harking back to J. S. Mill and a host of his followers, has reiterated faith in the reasonableness of man. The implication of this view is that

> if you argue well enough, cogently enough, and persuasively enough in favor of a certain view, then, if that view contains a certain element of truth, you can ultimately induce other people to accept it; and, further, that by virtue of their acceptance of it, their actions will be modified.[3]

The fact is, men act both reasonably and unreasonably. Early environment, individual physiological factors, "climate of opinion," emotional "complexes," all enter into reactions to new ideas. But at least as basic as any of these is the native ability to think, to deal with ideas and problems—that which we sometimes call abstract intelligence.

In summary, liberalism contains at least four vital elements. First, it will assume an attitude of tolerance toward both the old and the new, the tried and the untried, and this attitude removes liberalism from the category of radicalism, which in order to effect its ends often becomes intolerant. Second, its avenue of progress will be by way of free human thought and expression. To keep such an avenue open liberalism must sometimes assume the defensive, sometimes the offensive; hence, liberalism calls for moral courage. Third, its instrument or compass is critical intelligence. True liberalism is never sentimental; its approach to problems is rational or intellectual. On the other hand, it will not seek to invalidate artistic or "spiritual" insight, but it will appraise the idea at the core of that vision. Finally, the goal or objective of the liberal is synthesis. The liberal is not passive; he is actively engaged in a search for new value that may be tied to the old, from which union may spring a new creation. He is constructively and creatively concerned with all social phenomena.

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[3] C. E. M. Joad, *Liberty Today* (New York: E. P. Dutton and Co., 1935), p. 30.

LITERALISM

The literalist distinguishes himself from the liberal by his rigidity. He has a governing system of beliefs which form a closed and unyielding circle, never to be broken, never to become constricted or enlarged. However, it should be emphasized that these beliefs are of a basic nature; they apply to more or less ultimate things, such as the origin and meaning of the universe, of life and death, the general meaning of sin and evil, human destiny, human values, attitudes toward other human beings, human possessions, human activities in the large. The source of this literalism is authoritarianism, and reliance upon authoritarianism springs from two common human weaknesses—fear and laziness. As Bertrand Russell has put it:

> Men fear thought as they fear nothing else on earth—more than ruin, more even than death. Thought is subversive and revolutionary, destructive and terrible; thought is merciless to privilege, established institutions, and comfortable habits; thought is anarchic and lawless, indifferent to authority, careless of the well tried wisdom of the ages. . . . thought is great and swift and free, the light of the world, and the chief glory of man.[4]

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[4] Bertrand Russell, *Why Men Fight* (New York: The Century Co., 1916), p. 178.

The designation of the second bulwark of authoritarianism, as mere "laziness," may be a bit harsh. The appeal of the fixed and inviolable belief finds response in the ever present human desire for security. Whether or not this can be traced, as some psychologists insist, to conditions surrounding the embryo and the young infant, it is admittedly a universal spring of human thought and action. Fear, in such cases, takes on a double aspect—that having to do with loss of immediate comfort, and that affecting ultimate or eternal security. It should not be surprising, therefore, if a given individual has acquired such an emotional "set," that he react uniformly in opposition to those influences making for changes in fundamental points of view.

Authoritarianism, however, carries with it another emotional component, generally regarded as of more admirable character than either fear or laziness; that is, loyalty. Give men of a certain temperament conviction as to the worth and importance of an institution, an official, or a regime, habituate them to an attitude of respect toward it or him, and there develops deep personal attachment which brooks no criticism. Any attack, though inspired by the best of motives, becomes a signal for vigorous defense or counterattack, and conflicts of this kind have been some of the most bitter in history. A great deal of confusion could be saved us today if we might always know the sources of pro-communistic or pro-Fascistic arguments. Conviction arrived at logically or through intellectual processes will be worth listening to; those springing from loyalty to an existing regime or individual can well be regarded skeptically.

Let us summarize again. First, the literalist by the very nature of his position cannot avoid intolerance. Second, the avenue he follows is one of regimentation; every man subscribes or suffers the consequences. Third, literalism uses as its instrument a greater or lesser degree of fanaticism, as opposed to the critical intelligence of liberalism. The fanatic is critical about one basic tenet only—the failure to conform to *his* authority. And fourth, the outcome of literalism is dogma. Liberalism calls for new synthesis in a changing world; literalism knows only one authority and one word. Truth is always open to question, welcomes complete investigation. Dogma resents any attitude other than that of complete and unquestioning acceptance. Thus the literalist easily becomes the bigot.

THE LIBERAL AS LEADER

Liberalism suffers today from an imputation of impotency. The popular notion of the liberal is of one who spends his time looking first at one, then at the other side of a given proposition, with the result that he can never quite make up his mind either for or against it. But liberalism does not preclude strong beliefs. If the liberal is worth his salt, he has convictions as to the value of certain truths and principles for which he will fight to a finish. But to the degree that he is an intellectual—at home in realms of abstract thinking—he will not make an efficient reformer in the rough-and-tumble of the social flux. Furthermore, he will be conscious of some of the excesses of his own reform party.

Wolfe has called attention to the classification made by F. H. Giddings wherein he distinguishes four mental types called the ideo-motor, the ideo-emotional, the dogmatic emotional, and the critically intellectual.

> These types correspond roughly to motivation and control by sensibility, emotion, sentiment, or belief, and impersonal, rational intelligence, respectively. The first three types react more to convictions involving personal praise and blame; the last to perception of impersonal causes.[5]

The member of the fourth class would often be identified as the academician or ''abstractionist.'' Undoubtedly, the leader of a social movement will be most effective as he is most unswerving in his final purposes; leadership of many kinds calls for a large measure of "desire-reinforcement," and whenever such a desire centers around either a favorite idea or ambition, argument carries little weight. However, leadership in many administrative and executive positions, as well as in the world of liberal thought, would seem to call for the highest capacity in problem-solving, along with insight into human motives and the will to accomplishment. Ability to weigh and to think through problems has never been limited to the cloistered savant.

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[5] A. B. Wolfe, *Conservatism, Radicalism, and Scientific Method* (New York: The Macmillan Co., 1923), p. 175.

There is a sense in which the history of liberalism is a study of human aspiration. Consequently, there is in almost every liberal movement the note of aggression—aggression against the intrenchments of fixation and static power. Matthew Arnold alludes to this spirit in his definition of democracy. In defense of it against the outcries of certain classes of Englishmen, he says:

> But those persons are complaining of human nature itself when they thus complain of a manifestation of its native and ineradicable impulse. Life itself consists, say the philosophers, in the effort *to affirm one's own essence:* meaning by this, to develop one's own existence fully and freely, to have ample light and air, to be neither cramped nor overshadowed. Democracy is trying *to affirm its own essence;* to live, to enjoy, to possess the world, as aristocracy has tried, and successfully tried before it. . . . So potent is the charm of life and expansion upon the living, the moment men are aware of them, they begin to desire them, and the more they have of them, the more they crave.[6]

It is the same spirit to which Soule pays respect in his dedication; but Soule, concerned as he is with the encroachment of capitalistic privilege upon the original and true meaning of Americanism, conceives of liberalism also largely in terms of defense. In similar vein, no doubt, various groups and organizations concerned with civil liberties would say they are engaged in a defensive enterprise. In ancient history, one is reminded of those periods in Greek history when the Orphic mysteries threatened to sweep the people into complete abandonment of the ways of reason, and would have succeeded perhaps, but for the sturdy defenses made by thinking leaders. But all such defenses are made by men who have breathed the atmosphere of freedom—of ''expansion'' and ''enlargement.'' If liberals have sometimes been characterized as chronic protestants, it is because they feel these impending encroachments or because they sense ''a larger truth.'' Life for the liberal can never become a closed book, can never lose its tang of adventure, its call to creativeness. Consequently, the most frequent emphases for the liberal are those upon enlargement of vision and upon integration. And this last-named emphasis again distinguishes the liberal from the radical. The latter is engrossed in his vision of the new, bitter in his attack upon the old, and so loses sight of any means of fusion or amalgamation. But with this process the liberal is profoundly concerned. It is his ability to see the humanly valuable in many types and fields of achievement—in both rationalism and religion, in both science and art, in the social and the individualistic, in authority and freedom; that is, to surmount the bounds of ''compartmentalism''—that makes him a true liberal and an intellectual leader.

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[6] Matthew Arnold, *Mixed Essays* (New York: The Macmillan Co., 1903), pp. 8-9.

LIBERALISM IN ANCIENT CIVILIZATIONS

The movements in the history of civilization that could be associated with the enlightenment or expansion of the human spirit are numerous, including that remarkable social phenomenon of ancient India known as the Sankhya movement with its researches and debating halls, to which men and women were admitted on equal footing; the spirit of ancient Greece; Christianity breaking with Hebraism; the Renaissance with its overflow into almost all the activities of modernity; the conflicts of science and theology, of feudalism and the *bourgeoisie,* of Protestantism with Catholicism, of democracy and absolutism, of modernism and fundamentalism. Modern Western civilization is related to virtually all these movements, but among them are several that had direct bearing upon the course of American life. For example, the Christian religion and its theologies have exerted profounder influence than is commonly realized. But to understand this, it will be necessary to glance at both its liberal and literal interpretations.

Christ, in his own day, of course, was regarded by a large portion of the small community where he lived as a radical and a rebel. He said and did shocking things. Modern Christians say he taught the spirit rather than the letter of the law, but to a letter-loving people and an institutionally-minded hierarchy he taught open blasphemies. He broke precedents and rites and rules day after day: but one point should never be overlooked. He did not advocate scrapping the old law; he reinterpreted it, broadened it, gave it meaning and vitality. He was learned in the Jewish lore, attended institutional ceremonies, interpreted life in terms of familiar tradition. Thus, in many ways, he fulfilled the definition of the liberal, though his criteria of conduct could not be regarded, by any means, as rationalistic.

Arnold in analyzing Hellenism and Hebraism[7] points out the stress of the latter upon firm obedience and practicing one's duty as contrasted with Greek emphasis upon intelligence and knowledge of the grounds of one's conduct. The concern of the Greek was with knowing things as they really are, that of the Hebrew with conduct and conformity. And for that conduct, the Hebrew, as a rule, quoted from the "Law." To be sure, there were great prophets who concerned themselves with the establishment of "Law," who went to the Source and attained insight into what they felt to be eternal principles. But too many of the followers prided themselves upon the exactness of their following. Jesus chided them about it repeatedly; though in a theocratic government this literalness is almost inevitable. The Greek acknowledged no such authority. He regarded the world as an open book, with a tale to be pursued by any man who possessed wisdom and who chose to spend time upon it. Not that the Greek claimed to have ready answers to the world's enigmas—he was too wise for that—but, he held, the enigma was there for any man's study; the whole territory of What and How and Why had not been pre-empted.

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[7] Matthew Arnold, "Hebraism and Hellenism," in *Culture and Anarchy* (New York: The Macmillan Co., 1916).

> The conception of Truth as an end to be pursued for its own sake, a thing to be discovered and puzzled out by experiment and investigation and especially by Reason, a conception essentially allied with that of Freedom and opposed both to anarchy and blind obedience, has perhaps never in the world been more clearly grasped than by the early Greek writers on science and philosophy. One stands amazed sometimes at the perfect freedom of their thought.[8]

Intellectual freedom of the kind congenial to the Greeks has probably never existed to such complete degree since their time. Certainly the Romans did not achieve it, partly because of their practical-mindedness; they were not concerned with searchings for the truth so much as with rules for getting things done. Nevertheless, the liberal spirit showed itself repeatedly in the *jus civile* and the *jus gentium* of the Romans, and it appeared in the work of one of their emperors, Marcus Aurelius. This famous Stoic wrote his *Meditations* in the midst of a busy life, withdrawing even during his military campaigns to formulate and set down those ideas which seemed to him of even more importance than the duties of the day. He was deeply religious, yet he placed high value upon reason.

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[8] Gilbert Murray, "The Value of Greece to the Future of the World," in *The Legacy of Greece,* ed. by R. W. Livingstone (Oxford: The Clarendon Press, 1928), p. 22.

> For it is the part and privilege of the reasonable and intellective faculty, that she can so bound herself, as that neither the sensitive, nor the appetitive faculties, may not anyways prevail upon her. For both these are brutish. And therefore over both she challengeth mastery, and cannot anyways endure, if in her right temper, to be subject unto either.[9]

IN THE MIDDLE AGES

As the pall of the Dark Ages crept over Europe, another civilization, across the Mediterranean, took up the torch of secular learning, and in many respects prepared the way for the Renaissance in Europe. This mission fell to the Moslems, among whom Greek thinking was preserved for many centuries.

The last and greatest of the Moslem thinkers to live in Spain was Averroes (1126-1198). He was born at Cordova and spent most of his life in Spain and Morocco; and this fact accounts in part for the extent of his influence in medieval Europe. It is significant that Averroes suffered the common fate of liberals even amid the influence of tolerant Moslem chiefs, for about 1195 the growing distrust of the multitude toward anyone who dared go beyond the Koran for his natural science broke loose. He was accused of heresy and banished, and for a time attempts were made to stamp out all liberal culture in Andalusia. But later he was restored to his post of honor.

Averroes' life was important not only because of his own attitude and contributions to thought, but also because he helped spread the knowledge of Aristotle to the world of scholasticism. It will be recalled that during the Dark Ages the works of Aristotle had been lost to Europe, but beginning with the twelfth century they began to wield influence. One of the sources of this influence was Averroes. Another group relied upon the classical translation of Thomas Aquinas, but the latter is well known to have owed much directly to Averroes.

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[9] Marcus Aurelius, *Meditations,* tr. by M. Casaubon (London: Everyman's Library, J. M. Dent and Sons, Ltd., 1906), p. 82.

Thomas Aquinas (1224-1274) set out on the highly liberal project of reconciling religious and scholarly approaches to truth as they were known in his day. He lived in an age when scholasticism held full sway, and his argument was entirely in those terms, but in his thinking he included not only Christian theology, but Greek philosophy—especially that of Aristotle as seen through his own Neo-Platonism—and the teachings of Arabian and Jewish philosophy. He was known, in fact, as *doctor universalis,* and his broad-mindedness had much to do with his establishment of a Catholic doctrine that was to prove the basis of hundreds of years of successful church survival.

SPINOZA

With the flowering of the Renaissance the spirit of freedom was reborn in totally new terms. Men became infected with the enthusiasm to explore every realm, and for the second time in Western civilization a great group of the world's most brilliant geniuses lived and pursued their remarkable careers. With the work of men like Copernicus, Galileo, and Newton in science, Leonardo da Vinci in art and engineering, and Shakespeare in literature, the world took fresh hold on all kinds of ideas, and religious and philosophical thought shared in this intellectual expansion. One of the earlier of these religious thinkers was Giordano Bruno, an Italian of the sixteenth century who caught the implications of the enlarged universe and who traveled over Europe attempting to rouse men to the beauty of the new vision. Bruno, however, was both a mystic and an unbalanced radical, and he served best as a forerunner of another and far greater mind, whose work still stands as one of the monumental philosophies of the West.

Baruch de Spinoza (1632-1677) knew the price of liberalism in a sphere of religion other than Christianity. Son of orthodox Portuguese Jews living in The Netherlands, he was anathematized and excommunicated from the synagogue at Amsterdam at the age of twenty-four, and never again became affiliated with a religious institution. All his life he lived with humble Dutch families, supporting himself by grinding lenses, receiving a pension as a bequest from one of his friends—but requesting that it be reduced from 500 to 300 florins—and in later life refusing a professorship of philosophy at Heidelberg in order to pursue his studies without restrictions of any kind.

Spinoza was alive to the implications of the new learning of the Renaissance, but he approached it by scholastic methods. In his great masterpiece, the *Ethics,* he assumes the rational nature of the universe, and argues by geometrical method from a series of propositions to the concept of the universe and God as mutually all-inclusive, dynamic, and active. But in other works, Spinoza makes a much more direct attack upon the question of liberty in the usual sense. Two of his chapters especially, ''Of the Foundations of a State,'' and on ''Freedom of Thought and Speech,'' have become justly famous. In the first he says:

> A body politic of this kind is called a Democracy, which may be defined as a society which wields all its power as a whole. . . . I believe it [a democracy] to be of all forms of government the most natural and the most consistent with individual liberty. In it no one confers his natural rights so absolutely that he has no further voice in affairs; he only hands it over to a majority of a society, whereof he is a unit. Thus all men remain, as they were in a state of nature, equals.[10]

Still more trenchantly he attacks the question of freedom of thought. The sub-title of the chapter is: ''That in a free state every man may think what he likes, and say what he thinks.'' Moreover, he argues, it is impossible for kings to control men's minds. Spinoza might be given pause by the results of the efficient use of propaganda in certain modern states, but such exhibitions would in no wise change the wording of his noble conclusion:

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[10] Baruch Spinoza, *Tractatus Theologico-Politicus,* trans. by R. H. M. Elwes (London: Bell and Sons, 1889), pp. 205-7.

> No, the object of government is not to change men from rational beings into beasts or puppets, but to enable them to develop their minds and bodies in security, and to employ their reason unshackled; neither showing hatred, anger, or deceit, nor watched with eyes of jealousy and injustice. In fact, the true aim of government is liberty.[11]

Spinoza's work stands as one of the mountain peaks of human thought and his whole outlook is that of a great liberal. He was a synthesist of the medieval and the modern; he sought the best in many systems of thought; he stressed constantly the rational as against either blind acceptance or emotional fervor; and he did this not only in one field but in many.

KANT

We have seen that the empirical trend of English thought from Bacon and Locke to Hume brought it face to face with skepticism.[12] Hume himself had tried to ward off the extreme implications of such ''philosophical melancholy,'' knowing well that it can choke ambition and deaden activity. He had set out to show that the findings of rationalism, so far as ultimate truths and meanings are concerned, are utterly undependable, but he argued that we may rest, and rest happily, upon the findings of the senses and the ideas which we can build out of those findings.

In the work of Immanuel Kant (1724-1804) we find another monumental effort at philosophical synthesis. Kant as a young man had come under the influence of Pietism, a German religious movement originating in his home town of Koenigsberg, from which, together with the strong moral influence of his father, he derived a permanent conviction of the moral nature of the universe, on the one hand, and a distaste for religious dogmatism, on the other. In the next place he was influenced by what was known as Leibniz-Wolffian philosophy, a thoroughly rationalistic doctrine. In the third place, Kant was deeply interested in the natural science of his time. Newton's physics had been accepted by the German universities, and Kant throughout his life never questioned the finality of this new world-view. His earliest writings, such as his *General History of the Nature and Theory of the Heavens* and his lectures on the *Theory of the Winds,* dealt with science, and he published occasional articles on astronomical, biological, and anthropological subjects to the end of his career, though his main interest in the field shifted to the essential characteristics of scientific method and thought. In the fourth place, Kant was undoubtedly affected by the pleas of Rousseau for consideration of the worth of the individual. It is said that he omitted his famous daily walk under the linden trees the day he read *Emile.* Further, he doubtless placed a higher estimate upon the importance of feeling in human life from this time on. But to say that thereupon he became a sentimental humanitarian would be quite erroneous. Much of the eighteenth century's faith in the elemental goodness of man and the ascription of all evil to the artificialities of civilization he regarded as superficial and naive. He thought of struggle as an invaluable aid in man's development, and urged that nations attempt to work out contractual relations to insure the peace—a conception quite the opposite of that of a reversion to an idyllic state of barbarism.

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[11] *Ibid.*, p. 259.

[12] Chapter XII, p. 350.

Finally, Kant was profoundly affected by the implications of the skepticism of Hume. When he read a German translation of the Scottish philosopher he was roused from what he called his "dogmatic slumber," and it is significant that this occurred in the early part of the so-called "period of silence" preceding his great *Critique of Pure Reason.* In it he undertook to meet the challenge of the empirical English school that had reached a kind of logical climax in Hume, but at the same time he recognized the limitations of rationalism. Kant performed one of the truest of liberal functions; he took account of the ramifications of thought in his time, and contrived therefrom a new pattern with so fine a unity, that though men in the course of time have pulled off some of its surface threads they have never destroyed the great warp and woof of it.

Kant's *Critique of Pure Reason* is a highly abstract piece of philosophical reasoning. With the German bent for searching after theoretical principles, Kant felt that first of all he had to reason his way to a fundamental position, from which he could later advance to applications and amplifications. Hence, it is not surprising that in his later work, *Critique of Practical Reason*—sometimes called his theory of ethics—we find certain formulas having most direct and significant bearing upon the topic of liberalism. The two most famous of these he called the "categorical imperative" and the "practical imperative." Mention has been made of Kant's belief in the fundamental position of moral principle in the universe. Consequently when he set about the formulation of ethical rules or laws he sought them in universal form. "The categorical imperative," says Kant, "would be that which represented action as necessary of itself without reference to another end, i.e., as objectively necessary." And he goes on to point out that there is only one such imperative:

> *Act only on that maxim whereby thou canst at the same time will that it should become a universal law.*

However, in practical life we are faced with conflicting human wills, concerned with immediate and relative ends.

To bring ethical conduct back to the universal plane, therefore, but in terms of rational human beings, Kant gives us his "practical imperative":

> *So act as to treat humanity, whether in thine own person or in that of any other, in every case as an end withal, never as means only.*

It is not hard to understand why some of the works of a man who could write two profound rules such as these should be unpopular in Germany today. But Kant, toward the end of his life, took up the cudgels for liberalism in more specific fashion.

In 1788 the Minister of Education in Prussia had issued a decree forbidding any teaching that did not conform to orthodox Lutheranism, and had ordered the discharge of every suspected heretic. Kant remained unmolested until he wrote his *Religion Within the Limits of Pure Reason* in 1793. The *Berliner Monatschrift,* which had undertaken to publish the work, was ordered to suppress it. He wrote friends at Jena arranging publication of the essay by the university press at that place, which was outside Prussia. This resulted in a direct order from the King, concluding—in a manner highly suggestive of the present German regime—as follows:

> We demand of you immediately an exact account, and expect that in the future you will give no such cause for offense, but rather that, in accordance with your duty, you will employ your talents and authority so that our paternal purpose may be more and more attained. If you continue to oppose this order you may expect unpleasant consequences.[13]

Kant protested that every scholar should have the right to formulate and make known his own judgments on religious questions, but agreed to keep silent on the subject during the reign of the king then on the throne.

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[13] Quoted by Paulsen, *Immanuel Kant* (New York: C. Scribner's Sons, 1902), p. 49.

He had not agreed, however, to keep silent on other questions, and in 1795, when Kant was seventy-one, appeared his essay *Concerning Eternal Peace,* in which he attacked standing armies and imperialism, argued that the civil constitution of every state should be republican, and even advocated that war should not be declared except by plebiscite! All doctrines of this sort develop naturally, of course, from the imperatives which he would establish for men's conduct. Kant can be regarded as one of the profoundest thinkers of modern times, but by all the criteria which men have set up, Kant will also qualify as a great liberal, sharing in the same world-spirit that found expression in the utterances of Voltaire and Goethe.

Three years after the accession of Frederick William II, the French Revolution had set all the thrones of Europe trembling. At the time when most of the teachers in Prussian universities had rushed to the support of legitimate monarchy, Kant, sixty-five years young, hailed the revolution with joy; and with tears in his eyes said to his friends: "Now I can say like Simeon, 'Lord, let now Thy servant depart in peace; for mine eyes have seen Thy salvation.' "[14]

LIBERAL MOVEMENTS OF MODERN TIMES

Mention has already been made of some of the social aspects of liberalism. There is, to be sure, danger of reading contemporary points of view into happenings of past centuries. Yet if we evaluate these on the basis of their contribution to "an enlargement of human experience," some will certainly fall into the category of liberal movements; for example, the writing of *Magna Carta,* the achievements of the Parliaments of 1265 and 1295, the revolt of John Wycliffe from papal authority in 1366, the work of such organizations as the Levelers and the Diggers. Similarly, in continental Europe religious and political struggles marked the break with old literalisms. Many of these began as extremist movements, for the radicalism of today often becomes the liberalism or even the conservatism of tomorrow. In England, a large measure of adaptability to liberal ideas preceding the period of the Commonwealth brought about many social advances to correspond with the broadening of philosophical and scientific outlook. But in France, owing to intrenched absolutism in both Church and state, the situation came to a complete *impasse,* to be resolved only by the Revolution.

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[14] Will Durant, *The Story of Philosophy* (New York: Simon and Schuster, 1927), p. 307.

The period of King Louis XV (1715-1774) was the period of the so-called Enlightenment in France. The long reign of Louis XIV had witnessed a great development of art and literature, but there was little originality in political and philosophical thinking. The reign of his successor, however, saw the advent of Voltaire, of Montesquieu, of the Encyclopedists, and of Rousseau. During the first part of the period the revolt was largely an intellectual one. Voltaire (1694-1778), its most outstanding figure, was a Deist. He hated the Church and found in English Deism and among the English Quakers new approaches to religion which sharpened his assault upon the Catholic hierarchy in France. Indeed, his whole attack was influenced by the freedom of thought and expression he found in England, where he lived for some three years. Throughout his long life and voluminous writing, Voltaire persistently and consistently made war upon superstition, ignorance, and blind obedience. Politically, however, Voltaire thought of reform as coming from the top down, through the efforts of liberal monarchs such as Frederick the Great, not from the people upward.

Voltaire and Rousseau were both members of the group called the Encyclopedists, whose leaders were Diderot and D'Alembert. The Encyclopedia contained a wide variety of articles, many of them highly personal in nature, some of them openly advocating materialism, atheism, and other ''advanced'' beliefs of the times. But in its way, the Encyclopedia represented a landmark in French history, for it spread information among all classes, and undermined respect for institutions and beliefs that had always been taken for granted. Voltaire, the Encyclopedists, and Rousseau—the last-named more directly than either of the others—were among the incendiary figures that led the way toward the final conflagration in 1789. However, another revolution with which we are more intimately acquainted had already been fought for liberal principles. But before dealing with political liberty we shall go back to earlier religious movements that have wrought important consequences in modern life and education.

PURITANISM

Puritanism is one of those human reform movements that begin in liberation and end in cramping literalism. If we look at Puritanism only in the light of those unlovely traits it had developed at the time of its demise, rather than those qualities with which it withstood the tyranny and profligacy of the age of its inception, we find it hard to make just appraisal. Its emphasis upon rigorous and exacting practices, upon hewing to the line, upon the tremendous role of duty and self-abnegation came into Western thought through Stoicism and the Pauline interpretation of Christianity. It would be difficult to emphasize too strongly the inseparability of religion and life in the Puritanic outlook, though, of course, this was a direct derivative of all medieval religion. Today religion cannot be called the basic controlling force in social life; in the seventeenth century

> life and religion were one. . . . Religion was part of the conduct of life, of all life, of all society; the respect and obedience that were given to constituted authority were founded on the acceptance of religious belief and practice.[15]

Further, the kind of document which the Constitution later became to certain literally-minded jurists of the United States, the Bible became to the founders of the Puritan theocracy. Here will be found the explanation of much of the otherwise inexplicable conduct of the Puritan. This religious belief was interpreted in the most literal terms of ''The Law'' as laid down in both Old and New Testaments. When at the beginning of her trial Anne Hutchinson asked ''what law had been broken, the Court answered, 'the fifth commandment,' which enjoined her to honor father and mother, whereas she had brought reproach upon 'the fathers of the commonwealth.' '' In the light of this kind of literalism we can understand better the concern the Puritan showed for his neighbor's conduct; one of the first of men, according to the Biblical account, who asked scornfully, ''Am I my brother's keeper?'' did so out of the depths of his own condemnation. Thus, we see, also, the grounds for the unification of religion and business; the slothful husbandman or the man who merely buried his capital, to keep it without increase, received scriptural censure. Every happening of everyday life was fraught with Providential significance. Every catastrophe was a sign of divine displeasure or Satanic malevolence; the Prince of Evil was an ever-present and dreaded personage; witchcraft was testimony to his constant activity. Increase Mather and Cotton Mather recorded bookfuls of this kind of evidence. On the other hand, every piece of good fortune was a token of God's favor. Thus to John Winthrop the timely discovery of a poisonous spider in one's porridge before one ate it offered sure evidence of the intervention of Providence; but when Mrs. Hutchinson and most of her family, a few years after her banishment, were cruelly murdered by the Indians, there were those who cited the fact in justification of her condemnation by the ecclesiastical court. It should be noted, also, that those who lived thus literally, who knew the daily exactions of a jealous God, developed first a power to face danger and deprivation with a kind of heroic stoicism and, second, a sense of humility and responsibility when they found themselves concerned with public duty. It should not be forgotten that stewardship of wealth among the early Puritans was a literal thing; and it was the loss of this sense—with the concurrent retention of the urge for acquisition—that resulted in some of the ugliest characteristics of a later American capitalism.

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[15] A. M. Low, *The American People* (Boston and New York: Houghton Mifflin Co., 1911), I, p. 98.

Further, there were gradations in the rigidity of Puritanic scriptural interpretation. Attention has been directed to the less Hebraic characteristics of the Plymouth colony as compared with those of its northern neighbors [16] and a like distinction can be drawn between the Connecticut colony at Hartford and the settlements on Long Island Sound, famed for their much maligned, though inaccurately described, "Blue Laws." Among Dudley, Winthrop, Hooker, Vane, Davenport, and Williams, though all were professed Puritans, there was great variation as to strictness in dealing with that which might be regarded as heretical. We owe much to those writers who have shown us that Puritans were not, generally, misanthropes; yet, literalists they were, and this characteristic in terms of genuine "Puritanism" is still inherent in American life to an extent not fully realized.

Puritanism came to its logical culmination in the preaching of Jonathan Edwards; but Edwards was an example of the literalistic thinker—not the mere theological martinet, so to speak. Giving promise as a younger man of unusual philosophical ability, he later became enmeshed in those Calvinistic premises from which his logical mind drove him to such untoward conclusions that thinking people everywhere revolted. Logical literalness, starting thus, can become more terrible than the literalness of ignorance. And it was reaction against the extreme form of Puritanism that gave Emerson a large audience in later years.

Literalism is, as has been pointed out, the outcome of implicit dependence upon authority. It is true that all men, from the most intelligent to the most ignorant, crave authoritative answers to fundamental questions; and we live at the close of a three-hundred-year period during which there has been a shift from almost total dependence upon one kind of authority, to a partial or total dependence upon another. It is also true that many modern men have tended to become literalists in their dependence upon science; though there are signs that this period of literalism is passing, and there is this to be said for true science: it never assumes finality. Puritanism, taking over an attitude of the Middle Ages, has consistently taken one side of this conflict, though it should also be said that a good deal more rationalism was exercised in Puritanism during its earlier than its later stages.

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[16] See Chapter X, p. 279.

CONFLICTS BETWEEN SCIENCE AND RELIGION

A. D. White, when he chose the title of his great study[17] was careful to use the word ''theology.'' In many ways it is a better word in this connection than religion, for White was concerned with the clashes between the intellectual defenses adduced by religion and new systems of thought. Ordinary believers do not reason regarding their religion; they accept. But their acceptance, generally, is based upon the word of the theologians. Luther insisted upon individual privilege in Biblical interpretation, but most Christian points of view are readily traceable to either great Catholic or Protestant expositors whose arguments have become classic.

It must not be forgotten that when this great struggle came on, all questions about human destiny which any man might raise could be answered authoritatively and finally by the Church. The world was a tidy little anthropocentric affair, with God the Father, and Jesus the Son, seated upon thrones but a few miles distant where they might look down observantly upon mankind, for whom the universe had been created. Hell lay somewhere underfoot—as evidenced by the smoke and fire that occasionally belched forth from certain mountain-tops—and the sky arched solidly overhead, where the angels hung out stars as lights each evening. Man's translation from earth to heaven or hell after death was a real and literal journey; moreover, these places assumed greater importance than life on earth, because life there was endless; earthly existence became merely a brief stage preparatory to that state across the way.

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[17] A. D. White, *A History of the Warfare of Science with Theology* (New York: D. Appleton and Co., 1897).

Unless we comprehend this point of view thoroughly it is impossible to understand the bitterness raised by the new cosmological science of Galileo, Copernicus, and Kepler. The issue was not a question of mere validity of argument, or of authority. Literalism had built up a universe so simple and comprehensible that any attack upon it became a threat against the most fundamental and precious concepts men possessed. One can catch the horror in Father Melchoir Inchofer's exclamation:

> The opinion of the earth's motion is of all heresies the most abominable, the most pernicious, the most scandalous; the immovability of the earth is thrice sacred; argument against the immortality of the soul, the existence of God, and the incarnation should be tolerated sooner than an argument to prove that the earth moves.[18]

However, this literal kind of interpretation was not limited to the Catholic fathers, nor did it succumb to scientific argument within a brief period. As late as 1873, the former president of a Lutheran teachers' seminary undertook to revive the controversy in a book published at St. Louis in which he argued: "The entire Holy Scripture settles the question that the earth is the principal body (*Haupt Koerper*) of the universe, that it stands fixed, and that sun and moon only serve to light it." Even the twentieth century heard the strange challenge of a sect-leader—one William Glenn Voliva, of Zion City, Illinois—offering five thousand dollars to the first professor proving to him that the earth is round, and declaring: "The earth is like a pie pan, with the North Pole in the center . . . there is no such thing as gravity."

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[18] Quoted by A. D. White, *op. cit.,* I, 129.

John Stuart Mill wrote his famous essay, "On Liberty" in 1858. In it he said:

> In our times, from the highest class of society down to the lowest, everyone lives as under the eye of a hostile and dreaded censorship . . . even in what people do for pleasure, conformity is the first thing thought of; they like crowds; they exercise choice only among things commonly done; peculiarity of taste, eccentricity of conduct are shunned equally with crimes; until by dint of not following their own nature, they have no nature to follow. . . . Now is this or is it not the desirable condition of human nature?
>
> It is so, on the Calvinistic theory. According to that, the one great offense of man is self-will. All the good of which humanity is capable is comprised in obedience, that is, in a way prescribed to them by authority; and therefore by the necessary conditions of the case, the same for all.[19]

Calvinism is deeply rooted in the United States. It must be remembered that it occupied a basic position in the formation of Presbyterian, Congregational, Baptist, Disciple, and even certain branches of Methodist churches. And it has spread into every corner of the country. Los Angeles, settled so largely by people from the Mid-West, was at one time in its history more Puritan than the Boston of the same period. The South has been one of the strongholds of Calvinistic doctrines; and it is interesting to know, in view of the general similarity of motives which prompted the Oregon Law of 1922 requiring attendance of all children (including Catholic and Lutheran) at public schools and the Tennessee law forbidding the teaching of evolution, that large settlements in Oregon came from Tennessee during the great westward migrations of the last century.

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[19] J. S. Mill, *On Liberty,* Modern Readers Edition (New York: The Macmillan Co., 1926), pp. 72-73.

Another significant point in this connection is that so large a portion of the pioneer groups of America in both South and West has been comprised of an ethnical strain known as the Scotch-Irish, who, on the one hand, were thoroughly Calvinistic, and on the other were bitter foes of all forms of aristocracy. The Scotch-Irish, according to John R. Commons, more than any other group, ''served as the amalgam to produce, out of divergent races, a new race, the American.'' They lived in northern Ireland, but strictly speaking were ''very little Scotch and much less Irish''; rather, they formed a composite of primitive Scot, Pict, Briton, Irish, and later Norwegian, Dane, Saxon, and Angle. They were a rugged race, virile and aggressive, pioneers and practical men of action. As Commons points out, they have occupied small part in the literary and artistic life of America (never having had, like the Puritans, a John Milton among their spiritual forbears), but in the Army, the Navy, in politics, and in business,

> they claim John Paul Jones, Perry, Andrew Jackson, Winfield Scott, Zachary Taylor, Ulysses S. Grant, Stonewall Jackson, George B. McClellan, Alexander Hamilton, John C. Calhoun, James G. Blaine, Jefferson Davis, Thomas Benton, Hendricks, John G. Carlisle, Mark Hanna, William McKinley, Matthew S. Quay, Andrew Carnegie, John D. Rockefeller, Horace Greeley, Henry Watterson, and hundreds alike famous in the more strenuous movements of American life.[20]

It is to be observed that this list represents East, South, and West in the United States, but names representing the earlier pioneer sections predominate. The Scotch-Irish were strictly Protestant, and, originally, of course, espoused a rigid Calvinism, of the sort developed by the Scottish kirk. Furthermore, they carried this point of view into interior America, and by their qualities of dominance stamped it deep into the thinking of the population of those regions. Woodbridge Riley, dealing with this influence under the head of Realism, says:

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[20] J. R. Commons, *Races and Immigrants in America* (New York: The Macmillan Co., 1916), p. 37.

> The Scotch-Irish, entering chiefly by way of the ports of the Middle States, carried along with their Presbyterian connections their philosophy of common sense. To trace this movement into the Allegheny Mountains and down the valleys of Virginia and of the Cumberland, is to trace a kind of intellectual glacier, an overwhelming mass of cold dogma which moved slowly southwards and ground out all opposition.[21]

This emphasis upon common sense, with its ''Presbyterian connections,'' was, of course, thoroughly literalistic; and the measure of its impress was dramatically demonstrated in the famous Scopes trial, at Dayton, Tennessee, in 1925.

The law against teaching evolution read:

> Be it enacted by the general assembly of the State of Tennessee, That it shall be unlawful for any teacher in any of the universities, normal and other public schools of the State, which are supported in whole or in part by the public school funds of the State, to teach any theory that denies the story of the Divine creation of man as taught in the Bible, and to teach instead that man has descended from a lower form of animals.[22]

In the contemporary newspapers John Washington Butler, the sponsor of this law, was described as a man of ''solid physical stature, slow in movement and in words, burnt as brown as an Indian by working in the fields, and above all, full of self-confidence.'' People like the early Puritans and like these, their spiritual descendants, are never troubled by uncertainty in such a controversy; they *know* the answer. And though they may be dogmatic, their behavior is generally marked by a degree of strength and sincerity that commands respect; consequently their influence is inescapable.

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[21] Woodbridge Riley, *American Thought* (New York: Henry Holt and Co., 1915), p. 121.

[22] Quoted by André Siegfried, *America Comes of Age* (New York: Harcourt, Brace and Co., 1927), p. 60.

The Scopes trial could have only one conclusion; under the law the teacher was guilty. Later a "college"—Bryan University—was established to insure the "right" teaching of biological principles and Alvin York, famous soldier of World War I, was made its president. Thus literalism in its religious sense proves itself no insignificant force in American educational life in the twentieth century.

LIBERALISM IN CHRISTIANITY

It can hardly be said that religious liberalism has been a salient feature of that area in the Western World where Christianity has been the dominant religion. Hebrew ideology was cast in terms of an absolute monarchy, and the Messiah was to be a leader in terms of power, not humility—a natural concept among an oppressed Oriental people. Jesus' doctrine of a fatherlike Deity and the importance of the humble man in the eyes of God took root, not in the East, but in a Greco-Roman civilization. With the crumbling of that civilization the Church built itself into a new hierarchy, coming, in its "great thousand years," to a climax of dictatorial power. During that period there were a few liberals like Erigena and Roger Bacon and Thomas Aquinas, but much of their thinking was not popular in their own time; and only later were some of their points of view seized upon as the way out of serious dilemmas.

The Reformation heralded the breakdown of medieval absolutism, with the attempted return to original Christian doctrines. This in no wise forestalled a new kind of literalism, as we have seen, but again it reinforced the self-respect of the common man. That a man's worth is not dependent upon his worldly station is part and parcel of both Christian and democratic doctrine; and it is significant that absolutists like Hitler, Stalin, Mussolini, and the Japanese war leaders are hostile to Christianity.

Since the time of the Renaissance, liberal movements within Christianity have been the result of the advance of science. The cosmology of the Middle Ages was completely religious; the cosmology of today is completely scientific. But all questions relating to man's origin and man's place in the universe are inescapably of religious significance; hence, all revisions of popular concepts must result in conflict, though these revisions thus far have taken place within the framework of Christianity. With respect to certain scientific fields today there is undoubtedly more tolerance in the Roman Catholic Church than among some of the Protestant sects. The older church has learned some bitter lessons in this regard, though it still opposes any application of scientific knowledge which in its view will have deleterious ethical effects. On the other hand, a few Protestant sects have surrendered positions in the old orthodoxy which Catholicism holds most sacred.

DEISM

One of the most important liberalizing movements following the impact of scientific thought upon Christianity was Deism. Of English origin (Lord Herbert of Cherbury, 1583-1648, was commonly called the "Father of Deism"), it affected the thinking of other countries more than of England. It insisted upon the natural origin of religions and consequently opposed the claims of revelation, though believing in the existence of God. One of its emphases was a result of the train of thought set in motion by Newton and Descartes; namely, a view of the universe in terms of mechanical law rather than of divine personal concern. However, the English Deists were not pure rationalists, and some of them, like Shaftsbury, placed great emphasis upon the human capacity for appreciation of worth and beauty. In England better scholarship and greater minds were ranged on the side of orthodoxy than on the side of Deism; but its influence made for a more general attitude against literalism, and in other countries it included famous names—Voltaire in France, Lessing in Germany, and Franklin, Washington, Paine, and Jefferson in America.

LIBERALISM IN AMERICA

The citing of these names brings us once more to the American scene. Up to the very recent past, liberalism in America, when given special significance, has commonly been conceived in political guise. An exception to this would be the so-called Transcendental Movement, but others on which a majority probably would agree—the Revolution, the Jeffersonian movement, and the abolition of slavery—were largely political in character. We have already dealt with the man who has been called ''the voice of the Revolution,'' Thomas Paine, and with the figure most eminently associated with transcendentalism, Ralph Waldo Emerson.[23] Attention here, therefore, will be directed to the figures of Jefferson and Lincoln.

THOMAS JEFFERSON

Thomas Jefferson stands in American thought as perhaps the greatest exponent of liberty. The democratic movement which he fostered in opposition to ''Federalism'' culminated in his election to the Presidency, but his career and writings are even more significant for liberalism in other ways. He was a man of many and broad interests, concerned with politics, with economics, with religion, with education, with agriculture, with library cataloguing, and with several of the arts, notably architecture. Jefferson was born and grew to maturity on the frontier of his day, but once launched on a public career, he devoted practically his entire life to it. Following the session of the Continental Congress during which he prepared the first draft of the Declaration of Independence, he returned to the Virginia Legislature. There he introduced four significant bills: the repeal of the laws of entail, the abolition of primogeniture, the system of general education, and the guarantee of religious freedom. In an earlier session (in 1769) he had shown the same type of liberalism by introducing a measure empowering proprietors to manumit their slaves without removing them from the state. In the session of 1776 he again advocated the emancipation of slaves and it should be remembered that his first draft of the Declaration contained a noble denunciation of slavery which was later stricken out by others. Once again, in 1784, in a plan presented to Congress for the government of western territories, he included a provision that slavery should not be permitted within them after 1800. The provision was defeated in the Ordinance of 1784, but slavery was prohibited for the Northwest Territory by the Ordinance of 1787. In governmental theory Jefferson was deeply influenced by Locke's exposition of the compact; among French writers he admired Condorcet more than Rousseau. Significantly, Jefferson in writing his own epitaph stressed those accomplishments in his career which he felt to be truly creative, at the same time voicing that liberalism which shaped his thinking: "Here was buried Thomas Jefferson, author of the Declaration of American Independence, of the statute of Virginia for religious freedom, and father of the University of Virginia."

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[23] See Chapter X, p. 297, and Chapter XII, p. 360, respectively.

Jefferson's concern about education was lifelong. As part of his work in revising the laws of Virginia in 1779, he proposed the establishment of primary and secondary schools and the reorganization of William and Mary College. The most frequently quoted excerpt from Jefferson's educational writing is his plan for education in Virginia:

> This bill proposes to lay off every county into small districts of five or six miles square, called hundreds, and in each of them to establish a school for teaching reading, writing, and arithmetic. The tutor to be supported by the hundred, and every person in it entitled to send their children three years gratis, and as much longer as they please, paying for it.

> These schools to be under a visitor, who is annually to choose the boy, of best genius in the school, of those whose parents are too poor to give them further education, and to send him forward to one of the grammar schools, of which twenty are proposed to be erected in different parts of the country, for teaching Greek, Latin, geography, and the higher branches of numerical arithmetic. Of the boys thus sent in any one year, trial is to be made at the grammar schools one or two years, and the best genius of the whole selected, and continued six years, and the residue dismissed. By this means, twenty of the best geniuses will be raked from the rubbish annually, and be instructed at the public expense, so far as the grammar schools go. At the end of six years' instruction, one half are to be discontinued (from among whom the grammar schools will probably be supplied with future masters); and the other half, who are to be chosen for the superiority of their parts and disposition, are to be sent and continued three years in the study of such sciences as they shall choose, at William and Mary College, the plan of which is proposed to be enlarged, . . . and extended to all the useful sciences. . . . Of all the views of this law none is more important, none more legitimate, than that of rendering the people safe, as they are the ultimate guardians of their own liberty.[24]

He gave long years of strenuous thought and effort to educational work of all kinds, including the establishment of public libraries in Virginia, though in later years his energy was directed mainly to the founding of the University of Virginia. Throughout he was actuated by the conviction that education must play a large part in the development and survival of democracy.

In 1786 he wrote from Paris to George Wythe, his colleague on the committee of revision:

> I think by far the most important bill in our whole code is that for the diffusion of knowledge among the people. No other sure foundation can be devised for the preservation of freedom and happiness. Preach, my dear Sir, a crusade against ignorance. Establish and improve the law for educating the common people. . . .

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[24] Quoted from W. H. Kilpatrick, *Source Book in the Philosophy of Education* (New York: The Macmillan Co., 1927), pp. 11-12.

> The tax which will be paid for this purpose is not more than the thousandth part of what will be paid to kings, priests, and nobles who will rise up among us if we leave the people in ignorance.

Earlier in the same year he had written to George Washington:

> It is an axiom in my mind that our liberty can never be safe but in the hands of the people themselves, and that, too, of the people with a certain degree of instruction. This is the business of the state to effect, and on a general plan.
>
> I do most anxiously wish to see the higher degree of education given to the higher degree of genius [he wrote in 1795] and to all degrees of it, so much as may enable them to read and understand what is going on in the world and keep their part of it going on right.

. . . About the time that Jefferson drew his great bill to establish elementary schools (September, 1817), enlarged the next month to provide also for higher education, his writings are full of enthusiasm for general education.—''Enlighten the people generally, and tyranny and oppression of body and mind vanish like evil spirits at the dawn of day''; ''if the condition of man is to be progressively ameliorated, as we fondly hope and believe, education is to be the chief instrument in effecting it.''[25]

Of the University of Virginia he was truly the ''father,'' acting as its architect, overseeing its construction, helping in the raising of funds, and laying down plans for the course of study, admission, graduation, government, and the employment of faculty. In connection with the item last named it should be noted that he generally ignored the religious affiliations of professors, declared for freedom of thought (though he frankly undertook to get professors from ''republican-minded'' institutions abroad, such as Geneva and Edinburgh, and even prescribed the text-books for the courses of law), and maintained the principle of life-tenure. To one of his English correspondents he wrote:

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[25] Quoted from R. J. Honeywell, *The Educational Work of Thomas Jefferson* (Cambridge: Harvard University Press, 1931), pp. 12-13.

> This institution will be based on the illimitable freedom of the human mind. For here we are not afraid to follow truth wherever it may lead, nor to tolerate any error so long as reason is left free to combat it.[26]

—one of the finest expressions of its sort in the history of higher education.

Jefferson gave his life unstintedly to the promotion of the public good which he conceived to involve all types and conditions of men. He was interested in the advanced learning of his day; he was a thoroughgoing liberal, but he was always concerned with the *enactment* of the principles he advocated in terms of American life.

ABRAHAM LINCOLN

Thomas Jefferson lived in a period of revolutions and the breaking of old illiberal bonds. He was a contemporary of Kant, Voltaire, Rousseau, and Condorcet; he took part in the American Revolution, and was in Paris during 1789 and the five years previous during the stirring events leading up to the French Revolution. During the succeeding seventy-five years the principle of liberty underwent almost continuous revival. In 1848 a series of revolts under the leadership of liberal parties broke out in France, Italy, Germany, Austria, and Hungary. Only one of the attempts resulted in the formation of a temporary republic (in France) and the reactionary oppression following in Central Europe led to the emigration of thousands of the most liberal-minded to the United States. Here, however, the problem of human freedom also soon reached one of its acute crises. And America was fortunate in having in the prime position of leadership during the period a man who could see the issues divorced from the terms of regionalism and personality into which disputes so often degenerate.

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[26] Quoted from R. J. Honeywell, *op. cit.,* p. 99.

Lincoln made many references to Jefferson and the Declaration of Independence. To his mind, the course being pursued by the Southern States nullified the principles set forth in that document.[27] He once said:

> The principles of Jefferson are the principles and axioms of free society. And yet they are denied and evaded with no small show of success. One dashingly calls them ''glittering generalities.'' Another bluntly calls them ''self-evident lies!'' And others insidiously argue that they apply to ''superior races.'' These expressions, differing in form, are identical in object and effect—the supplanting the principles of free government, and restoring those of classification, caste, and legitimacy.[28]

Another man reared on the frontier had rebelled at ''classification.''

In the first inaugural he asked:

> Why should there be a patient confidence in the ultimate justice of the people? Is there any better or equal hope in the world? In our present differences is either party without hope of being in the right? If the Almighty Ruler of nations, with His eternal Truth and Justice, be on your side of the North or on yours of the South, that truth and that justice will surely prevail by the judgment of this great tribunal of the American people.

And in the Gettysburg address the climax is reached upon a note of a new birth of freedom and the imperishable nature of a government of and by the people. There can be no legitimate doubt of Lincoln's democracy and devotion to the principles of freedom for all men. He lacked Jefferson's catholicity of interests, his scholarly mind, and his more cosmopolitan outlook, but probably the trait in Lincoln's character that caused him to be misunderstood most often in his own time was that very liberalism and tolerance which today we most applaud.

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[27] For an interesting attack upon Lincoln and his so-called Jeffersonian principles see Edgar Lee Masters, *Lincoln the Man.*

[28] *Letter to H. L. Pierce and Others, Works* (New York: G. P. Putnam's Sons, 1906), V, pp. 25-26.

Parrington[29] in summarizing Lincoln's place in contemporary thought stresses his liberalism as a challenge to the callousness of the market-place:

> The real Lincoln can grow old-fashioned no more than Jefferson. As he went back in a day of sordid imperialisms to the earlier liberalism of the great Virginian, seeking to rescue the idealism of the Declaration of Independence from the desecration of the market place where it was openly flouted, so in a day of vaster imperialisms and greater complexity we may take counsel of his humanitarianism, his open-mindedness, his trust in tolerance and good-will, his democratic faith that held firm in spite of disappointment. The market place is mighty now as it was then, and liberalism finds as few friends there; but when did its gods become immortal?

CONTEMPORARY AMERICAN LIBERALISM AND LITERALISM

Today the word liberalism, used without a limiting adjective, will most likely be interpreted in the United States as applying to economc issues, or to political issues fraught with economic significance.[30] Communism and Fascism, as well as capitalism and socialism, have their roots largely in economic conditions. In the day when eternal welfare loomed as the primary goal of life for the majority of men, human striving was cast mainly in terms of religion; today with the multiplication of goods and gold supplies, the masses of men have become deeply concerned about the distribution of material possessions. With the advent of the Fuggers, the Chigi, the Rothschilds, in Europe, the collapse of the trade guilds, the rise of the *bourgeoisie,* the opening up of new trade routes, the coming of the era of colonization, of the Industrial Revolution, of applied science and invention, and of mass production, it was inevitable that material things should occupy more and more of men's thoughts. In America, especially, great natural resources and mass production have whetted our appetites for larger measures of those possessions that yield comfort, pleasure, and prestige. At the same time, concentration of wealth and increasing discrepancies in its distribution have sharpened men's consciousness of the potencies of wealth on the one hand, and of their own lacks, on the other. The result has been that questions of political freedom in the older Revolutionary sense have tended to give way to problems of economic freedom.

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[29] V. L. Parrington, *Main Currents in American Thought,* 3 vols. (New York: Harcourt Brace and Co., 1930), II, pp. 159-60.

[30] The extent to which these economic issues have permeated political thinking is illustrated in a series of answers given by leading Senators and Representatives when asked before the present war what they considered "the most urgent problem now facing the nation":

Senator Borah: "The greatest problem in the world today is the constantly increasing poverty of the masses. Armaments, monopoly and war mean the continuation of this poverty."

Senator Wagner: "Intelligent long-range planning by government."

Senator Byrnes: "Unemployment."

Senator Glass: "Stop spending more money than we collect."

Senator La Follette: "Put our idle manpower, idle capital, and idle productive capacity on farms and in factories back to work producing vastly more real wealth in the form of goods and services."

Without much question, the so-called ''New Deal'' will take its place in American history as a direct attack upon this question. The result in education has been that economic problems can now be discussed from all standpoints much more openly than was possible ten years ago. There have been attacks, such as that of Mr. Walgreen upon the University of Chicago and those upon Teachers College at Columbia University, but their repudiations of charges of communism have been generally accepted. These and many

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Representative Rayburn: "Recovery and definitive continuing progress."
Representative Woodrum: "Financial recovery."
Representative Warren: "Recovery of agriculture and business."
Representative Barton: "Debts and deficits."
(From *Life,* March 20, 1939, p. 18.)

other institutions, both higher and secondary, have taken the ground that freedom of thought demands an understanding of opposing points of view. When great groups of human beings espouse a doctrine as potent as Buddhism, or communism, or prohibition, or slavery, or Puritanism, or the Divine Right of Kings, those doctrines, however distasteful they may be to our present-day majorities, challenge the careful study of the liberal-minded. And though all these movements have abounded in literal-mindedness, opposition to them is no guarantee of liberalism. We now face a crisis demanding all the wisdom of all those great figures of the past whose names we have cited. But we do so amidst many literalisms. Probably our worst offenses outside the prolonged conflict between science and religion, have been found in perfervid orations about the sacrosanct character of the Constitution, the virtues of flag-waving *per se,* and the highly essential nature of *laissez-faire* economics. Groups such as the Daughters of the American Revolution (descendants of men regarded by all Tories as traitors!) and the American Legion have upon occasion exhibited cases of literalistic behavior that would call for considerable research among the records of Puritanism to match.

The present world situation has induced greater awareness of American heritages too readily taken for granted. In an address on March 26, 1939, Premier Mussolini was reported by the Associated Press to have instructed his followers thus: ''What are three words which form your dogma? Believe, obey, fight! In these words was, is, and will be the secret of every victory.''[31] Thinking individualism, tolerance, and democracy find no place in such a philosophy. Nor do the dictators for a moment pretend that they do! Liberalism may well profit from such bluntness. Democracy and liberalism should go hand in hand, but the relationship can prevail only where tolerance and critical intelligence drive out bigoted literalism.

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[31] Attention is called to the applicability of the elements of literalism, as outlined on pages 375-76, to the practices of both Mussolini's and Hitler's followers.

> Democracy . . . is the real recognition of each individual as an end, and an economy in which human powers and capacities for achievement, service, and happiness are symmetrically developed, wherever found, without deference to race, sex, language, birth, or nationality. As a philosophy of means, democracy denotes equity of opportunity and the cooperative use of human and natural resources to produce a worthy life for individuals.[32]

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[32] A. B. Wolfe, *op cit.,* p. 267.

Present
and
Future

PART IV

PRESENT AND FUTURE

Toward Synthesis
American Culture Today and Tomorrow
American Education Today and Tomorrow
Epilogical—To the Young Teacher

XIV. TOWARD SYNTHESIS

THE preceding chapters have attempted to put in place some of the backgrounds necessary to the perspective of modern American education. In the present chapter effort will be made to draw together certain of the aspects of these that are essential to an American philosophy of education: first, in relation to science; second, in relation to our cultural and educational heritage; and third, in more detail, relative to philosophic conflicts that are now profoundly affecting our outlook.

SCIENCE AND EDUCATION

In any consideration of science and education, men must be regarded as an end product of evolution—cosmic, biological, and social. From every human point of view, man lives in, by, and through *process*. It goes on about him and within him; it is the ground of his existence, and there is no escape from it. And for man the process is always "one-way"; he never repeats the life he has already lived. Similarly, so far as we can see, the earth and the whole universe run a course, though whether one-way or cyclic we hardly dare say. The age of our own planet can be roughly calculated, as likewise the age of life upon earth, and the age of man. The universe, the earth, and man are, in any case, caught in the inexorable ebb of time.

Man's recent advent upon earth can also be related to that of all other life preceding him or now surrounding him. All are subject to many of the same ''laws''; and even the dividing line between organic and inorganic grows constantly more blurred. Again, it is obvious that social forms have undergone changes since primitive times, and, from our point of view, have ''progressed'' from lower to higher level. Thus the child, humanity, the world, and the universe move together. Education can not fail to take account of process. Man can not play the role demanded by his intelligence and ignore his past and his future. That past he will deduce as nearly as he can through knowledge of natural processes and human history from *Pithecanthropus* to modern man. All man's physical, mental, and social development must be taken into account if we are to begin to understand him in the present and to plot his course for the future. Thus, education faces also the problem of human values accruing not alone to a present generation, but to posterity.

A second basic aspect of science in relation to education is its power, through application, to change man's manner of life; indeed, his very manner of thought. The radio will one day doubtless be regarded as having had an influence upon civilization in the twentieth century as profound as that of the printing press in the fifteenth. And this power will grow rather than diminish, since the manner of it has been reduced to a technique. ''The greatest invention of the nineteenth century,'' says Whitehead, ''was the invention of the method of invention.'' Its advance no longer depends upon the accidental genius of some individual, but upon proven methods adapted to the work of large groups. But in this area of science where benefits to man may be most immediate lies its menace. Its power may be prostituted to the purposes of greed and conquest. The question is being repeatedly asked whether man, having discovered such an instrument, can prevent his own destruction by it.

Part of the answer lies in understanding another phase of science. Men who have devoted themselves to the pursuit of knowledge in true scientific spirit, from Greek times and even earlier, have assumed an attitude which, if generally adopted, would heal the terrible wounds in civilization laid open by the instruments of science. They have thought of truth as having precedence over their own welfare. They have been disinterested, concerned with finding and defining that which they conceived as a benefaction to all men of all creeds and colors. They do not recognize distinct laws for Russian biology or for American economics.

A. B. Wolfe has contrasted the "scientific mind" with the "popular mind" as follows:

The Scientific Mind	*The Popular Mind*
1. Objective. Impersonal. Desire subordinated to intellect and reason.	1. Subjective. Personal. Intellect and reason subordinated to desire.
2. Observant. Sensitive. Curiosity impersonal and disciplined. Attention alert and pointed.	2. Unobservant. Insensitive. Curiosity personal or lacking. Attention diffuse and uncertain.
3. Significantly informed.	3. Insignificantly informed or ignorant.
4. Objectively skeptical. (Factual skepticism.)	4. Credulous or subjectively skeptical.
5. Critical (a) of premises, (b) of logical processes.	5. Uncritical or critical only of logical processes.
6. Tolerant.	6. Intolerant.
7. Intellectually patient. (Can suspend judgment.)	7. Intellectually impatient. (Jumps at conclusions.)
8. Constructively imaginative.	8. Fanciful, or unimaginative.
9. Fearless in facing facts.	9. Fearful of disagreeable facts.
10. Courageous in defending its scientific convictions.	

The Scientific Mind	*The Popular Mind*
	10. Lacking in the courage of its convictions, unless motivated by special interest, or backed by authority.
11. Unimpressionable by authority or prestige.	11. Reverential to authority, impressed by prestige.
12. Intellectually unconventional.	12. Intellectually conventional.
13. Unegotistic.	13. Egotistic.
14. Deterministic. Behavioristic. Not given to praising or blaming. Faith in law.	14. Libertarian. Given to praising and blaming. Faith in whim.[1]

Careful perusal of these contrasted qualities leads to the conviction that to call the present a scientific age is to express only a partial truth. But the attainment of a true scientific age will be the harbinger of a new era in civilization. Education has a far goal ahead of it in this direction.

EDUCATION AND WESTERN CULTURE

We have already called attention to social changes wrought through science. At the same time men's institutions, their arts, beliefs, customs, scholarship, and their other endless experiences leave deposits in cultural life that deeply affect succeeding generations. Thus far in the world's history, however, there have been disparate cultures, sometimes entirely ignorant of one another. For us, though this will become less and less true in the future, ''culture'' denotes Western culture. As yet, we have been little affected, except through the Hebraism inherent in Christianity, by anything outside of it.

In fact, there are those who would charge that we are also losing touch with our own past—that during the past forty or fifty years those who are responsible for education have progressively removed from the curriculum of studies the Western culture which produced the modern democratic state. The maintenance of that connection is vital because:

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[1] A. B. Wolfe, *Conservatism, Radicalism, and Scientific Method* (New York: The Macmillan Co., 1923), p. 222.

> In this tradition our world was made. By this tradition it must live. Without this tradition our world, like a tree cut off from its roots in the soil, must die and be replaced by alien and barbarous things.[2]

Whether we accept the first point or not, most of us will agree with the motive that prompts statement of the second. People of that writer's generation, at least, have had in their education a good many contacts with the free spirit of Athens, her art, philosophy, and drama. They have recognized in Roman culture something strangely akin to our modern American outlook, with emphasis upon the practical, careful organization and orderly procedure according to law. They have known with some detail the place of the Church through its rise to power, and the connections between Christianity and democracy. Some of them, however, may not have realized that the Latin secondary school took its origins from the cathedral and the monastery schools of the Church, and later from the Revival of Learning; and that elementary vernacular schools developed from the movement transferring authority in Christianity from the institution to the Word. The "Reformation" was a mass movement; and out of it grew entirely new purposes and methods in the educational process. Later from the spirit of political freedom developing in the latter part of the seventeenth century arose the conception of schools as "civil affairs," instruments of government; "the citizen supplanted the ecclesiastic" in both the organization and the supervision of classroom work, and the modern outlook had its beginning. In America, as we have seen, the common school took its greatest early stride forward during the Jacksonian era, while the high school and the college have come most completely into their own during the first forty years of the twentieth century. To attempt to understand education without its historical backgrounds would be as futile as the attempt to understand a great religion without knowledge of its scriptures.

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[2] *Cf.* Walter Lippmann, "Education vs. Western Civilization," *The American Scholar,* X (Spring, 1941), 184-93.

However, it should be clear that we are not interested simply in a series of events. As James Harvey Robinson has pointed out, events and conditions are changing so rapidly and we so rarely have really adequate information about past situations that we can seldom confidently apply what seem to be conclusions from them to the present. History cannot repeat itself with any exactness. Every situation comprises new time factors; it is necessarily unique for each generation. Human nature may retain its basic characteristics throughout; "natural law" may function uniformly; for the Platonist or religious man eternal forms may remain unchanged; but there is always a new shuffling of the elements of situations under the impact of time and change on the physical level and a new shuffling of social elements following new ideas and events on the human level. By the very nature of the case, the problems of one generation cannot be identical with those of another. Still we need to know as much as possible of the *meaning* of the past.

> Could we suddenly be endowed with a Godlike and exhaustive knowledge of the whole history of mankind, far more complete than the combined knowledge of all the histories ever written, we should gain forthwith a Godlike appreciation of the world in which we live, and a Godlike insight into the evils which mankind now suffers, as well as into the most promising methods for alleviating them, *not because the past would furnish precedents of conduct, but because our conduct would be based upon a perfect knowledge of the past.*[3]

By such trains of thought we are invariably and inescapably drawn back to two things: significance and meaning. But these in turn lead us to the realm of ideas and to philosophy.

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[3] James Harvey Robinson, *The New History* (New York: The Macmillan Co., 1931), pp. 20-21.

CONFLICTS OF IDEAS

The section preceding this attempted to trace in some detail four vigorous conflicts of ideas in Western—and particularly, American—civilization: equalitarianism versus social gradation, humanitarianism versus humanism, pragmatism versus idealism, and literalism versus liberalism. Evidence has been introduced to show that these conflicts have bearing upon education, and this point will bear amplification.

First, it should be observed that some of these schools or modes of thought tend to support each other or to blend together, and this is especially true of equalitarianism and humanitarianism. That these two have much in common becomes more than ever apparent when they enter the field of education. Similarly, humanism and gradation of various kinds go hand in hand through educational thinking. The other "schools" here treated are not so easily grouped. Pragmatists, as already indicated,[4] like to apply the word *humanism* to their own outlook, but the word in their usage connotes a scientific procedure—humanity finding its way, establishing its practices and values upon a day-by-day process of objective testing. However, such a tendency may lead toward humanitarianism, as Babbitt has argued, in thinking of mass mankind, and mass "progress" through the spread of knowledge. As has been pointed out, the pragmatist inherits a definite tradition of altruism. Moreover, Dewey exhibits a marked antipathy toward any theory looking in the direction of gradation, as will be shown later. Idealists, as a group, are humanists in the traditional or literary sense, because of their emphasis upon abiding standards. Of the last pair, liberalism and literalism, probably literalism can often be identified with equalitarianism, with humanitarianism and with pragmatism *in their popular senses.* That is, in so far as these doctrines are espoused in terms of "one man as good as another," or "good will to all men," or "common sense" they tend to become literalistic. On the other hand, among the leaders driving in these directions at certain times in history are to be found some of our greatest liberals of all time. Certainly John Dewey could never be classified otherwise. The point is, as should be clear from the chapter dealing with the subject, a great liberal project or movement in a given time may—indeed, *tends* to—deteriorate into the most rigid kind of literalism among later generations, as the history of Christianity, of Puritanism, of American Independence, of economic individualism, and many other movements will bear witness. Form, not principle, then becomes most essential. Revolt against this kind of literalism developed into the modern educational movement known as progressivism, and now, opposing this emphasis, comes another movement generally known as essentialism. We shall undertake to trace some of these conflicts in education.

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[4] See Chapter XI, p. 302.

EQUALITARIANISM IN EDUCATION

One of the keenest challenges in educational literature to the assumptions of gradation came several years ago from William McAndrew.[5] Christian Gauss, a short time previously, had argued that lack of preparation and ability make for an excessive proportion of the failures among college entrants and that large numbers of these young people should be spared the evil effects of such failures. The point of view of Dean Gauss was thus paraphrased by McAndrew: ''College is for the select; only those it calls fit should be let in. It is justified in its management by which 62.5 per cent of its admitted persons fail. Both state and endowed universities should build higher barriers before their doors. An adverse public opinion has hindered this desirable reform.''

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[5] William McAndrew, "Doubting the Deans," *School and Society,* XXXIII (Jan. 3, 1931), 21-28.

McAndrew is completely opposed to dependence upon the usual criteria cited by college deans, such as knowledge of algebra, spelling, grammar and sentence structure, and so on, as evidence that the student has ability to do college work. He deplores poor scholarship. ''But if a boy hasn't got it,'' he argues, ''we can't say he is of no use to the world and need not be taught any longer.''

The question to be settled is whether the university is to be looked upon as ''sieve or service.'' He continues:

> Suppose a public hospital should select for admission those deemed most likely to respond to treatment, or the priest concerned himself with those souls most easily saved. Up to yesterday the colleges have been bidding youth to train for service to their country by coming to the campus. The university has begged its money on the ground of being a civic church, a tree of life for the healing of the nation.

It is conceivable, of course, that those who have contributed the great endowments of the private colleges may wish this policy of selection preserved.

> But the state institutions which tax the farmers and laborers of Michigan or Montana for a university could hardly with justice escape responsibility for every boy and girl in the state who has passed the age of nineteen years. It is not the question whether they are fit or not. The tailor's business is to fit his customers; the welfare society's to guard all children; the state's to cherish every citizen. The state university is a tight knit part of democracy. When a state sets up a university the old theory of an aristocracy of brains goes into the limbo.

McAndrew's final answer to the university deans is that college teachers would better hang up their pretty gowns and hoods and put on overalls. He is convinced that much of the problem of college failure can be traced to poor teaching, rigidity of standards and methods, and unwillingness to adapt materials to the needs of the students. He draws the line rather sharply between the public school point of view and that of the colleges, and throughout swings emphatically to the equalitarian-humanitarian side of the debate.

Another of the older defenders of this point of view is W. C. Bagley, who became perturbed several years ago about the implications of mental measurements in education, and pointed out what he felt to be the inevitable outcome of certain procedures of the psychologists and the attitude thereby induced. He argued:

> If the determinist is right, the ideal of democracy is wrong; the forces that have resulted in a democratic social order are forces of social involution and not social evolution; the educational aims and ideals that have gone hand in hand with the ideal of insuring a certain kind of equality among humankind are a tragic, even ghastly mistake. The determinist talks loudly and frequently about wanting the truth. If he is right, this is the truth and he should not try to evade it.[6]

Democracy has tended to elevate the common man to a position of supreme collective control, and this democratic form of control tends to become constantly less a representative and more a mass action. The determinist would oppose this movement with one in which leaders are selected in advance by identification of their superior native ability, without taking into account the difficulty of teaching every man to "know his own place, appreciate his own limitations, and mind his own business."

Bagley believes there are democratic values that will be lost in such an approach. Not only does he feel that "an intellectual aristocracy is just as reprehensible as any aristocracy based upon family or wealth''; he is convinced that the social heritage makes for equality.

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[6] W. C. Bagley, *Determinism in Education* (Baltimore: Warwick and York, Inc., 1928), p. 25.

> I make no absurd claim that if I teach an average man the principle of gravitation, let us say, I am making the common man equal to Newton in originality, acumen, alertness or whatever qualities made Newton one man perhaps in a thousand million. I do maintain that I have enabled this common man in a very real way to participate in the experience of one of the most gifted men of all time; I maintain that I have given him one control over his environment equal to that which this gifted man possessed; and I maintain that *in respect of this* possession I have made this common man the equal of all others who possess it. . . .[7]

Differences in mentality, he admits, are biologically inevitable. It is not their existence but their meaning that we are concerned with. What the determinist has forgotten is that resemblances in ideas, ideals, aspirations, and standards may and do unite men by bonds that are vastly stronger than are the differences in natural endowment that would otherwise pull them apart.

This line of argument is similar to that used later by Dewey, who on more than one occasion has expressed his scorn of the intellectually snobbish.

> There is doubtless some degree of correlation between traits which promote superiority in more than one direction. But the idea of abstract, universal superiority and inferiority is an absurdity. The current loose use of these conceptions suggests overcompensation on the part of those who assume they belong to a superior class. It appears like an attempt to escape from the limitations and incapacities which we all know, subconsciously at least, that we possess. The endeavor to discover degrees of mental superiority which fit for ''leadership'' in the abstract is evidence of the hold upon us still exercised by feudal arrangements.[8]

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[7] *Ibid.,* pp. 20-31.

[8] Quoted by N. J. Lennes, *Whither Democracy?* (New York: Harper and Bros., 1927), pp. 77-78.

Again he says emphatically:

> The notion that intelligence is a personal endowment or personal attainment is the great conceit of the intellectual class, as that of the commercial class is that wealth is something which they personally have wrought and possess.[9]

That is, intelligence is as truly a social phenomenon as is wealth. The important point to be stressed is that men live by "embodied intelligence," and their capacity is limited by the objects and tools, especially the concepts embodied in language, that the group has made available.[10]

> A mechanic can discourse of ohms and amperes as Sir Isaac Newton could not in his day. Many a man who has tinkered with radios can judge of things which Faraday did not dream of.[11]

He is opposed to the notion that the way out of social difficulties is by rule of expert intellectuals. Such men would have to ally themselves either with the big economic interests or with the masses, and the latter kind of alliance would imply, after all, a sharing of the masses in government.

> The final obstacle in the way of any aristocratic rule is that in the absence of an articulate voice on the part of the masses, the best do not and cannot remain the best, the wise cease to be wise. It is impossible for high-brows to secure a monopoly of such knowledge as must be used for the regulation of common affairs.[12]

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[9] John Dewey, *The Public and Its Problems* (New York: Henry Holt and Co., 1927), p. 211.

[10] James Harvey Robinson has expressed the same idea in a single significant sentence: "It is obvious that the mind is a matter of accumulation and that it has been in the making ever since man took his first step in civilization."—*The Mind in the Making* (New York: Harper and Brothers, 1921), p. 206.

[11] John Dewey, *op cit.*, p. 210.

[12] *Ibid.*, p. 206.

''QUALITARIANISM''

Opposed to equalitarianism and humanitarianism in education is an attitude which may be called ''qualitarianism''—concerned always with the discovery, the development and the appreciation of worth and excellence. Humanistically, it assumes that not all human achievement is excellent, that much of it is poor, or mediocre, or even detrimental to the expression of so-called ''higher'' things. In education, therefore, this group does not hesitate to endorse selectivity and to assume that, in the effort to reach excellence, there must be competition and elimination.

In 1927 William S. Learned wrote a monograph which well exemplifies the qualitarian point of view. The author made four initial criticisms of American secondary education. First, he said, the schools operate like immense standardized factories, with constant shifting of teachers, programs and students.

> A teacher may have a pupil for a single half-year and never see him again, and a pupil may have eight different teachers in doing four years' work in one subject, if indeed he gives so much time to one subject. The mechanics of the whole operation fill the eye and mind, and what a pupil or teacher really is—the essential initial discovery in genuine education—is as completely masked as the personality of a guest in a mammoth hotel.[13]

Second, the schools [14] are non-selective and make no differentiation with respect to the pupils. ''Intellectual prince and intellectual pauper make their selections and are grouped promiscuously side by side.'' But the program is determined by the weaker pupils.

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[13] *The Quality of the Educational Process in the United States and in Europe,* Bulletin No. 20 of the Carnegie Foundation for the Advancement of Teaching (New York: The Carnegie Foundation for the Advancement of Teaching, 1927), pp. 4-5.

[14] He refers to public secondary schools.

> Third, ". . . the curriculum is a rope of sand, without texture or organization." All knowledge is broken up into convenient small-sized units.
>
> And it is possible even for a mind of very limited powers, if socially docile, and inspired by filial duty, personal pride, commercial advantage, or any of a dozen other extraneous motives, to take in and give out this information in recognizable word or paraphrase without seriously knowing or caring what it is all about. This is positively all that the school, and usually the college, requires, and of this it asks but a fraction—sixty per cent. For fear of evaporation the process is checked up at once—daily recitation, written review, monthly test, and term examination. These concluded, responsibility ceases, and "credit" is recorded, of which no future misstep, even though it discloses total ignorance, can ever deprive the pupil.[15]

Fourth, the teaching staff is not a group of scholars. Most high school faculties are amateurish and superficial in their dealings with knowledge. "Mediocrity reigns," and the case of these teachers is the more pitiable, because, for the most part they have excellent ability and have spent considerable time on their education. But they are a product of the very system of which they are a part, and do not know the meaning of independent, disciplined intellectual life and achievement.

> Such teachers abound in fine ideals, they love American life and are devoted to American youth, but they do not know enough of the inner values of the subjects they try to teach to convince themselves that a thorough dealing with these ideas should constitute the main business of school and college life.[15]

The author then contrasts this situation, and the attitudes involved, with those in Europe:

> The mainspring of education in Europe is an immemorial reverence for learning. The whole body of human knowledge and of scholarly achievement is conceived as constituting the supreme achievement of the race, to be preserved, increased, and handed on to posterity as its most precious possession.

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[15] William S. Learned, *op. cit.*, pp. 4-6.

> Higher education, therefore, is planned, not with a view primarily to securing the satisfaction of the individual, but with the purpose of selecting, first, those who are competent and worthy to cherish the human heritage in learning and to add to it; and, second, those who may be skillful in appreciating and applying it in the guidance of human affairs. . . .
>
> The European secondary school fixes a high mark toward which each aspirant rises just in proportion to the force and quality of his individual capacity, which is abundantly tested in the process. The American in his single all-embracing, low-standard school invites every one to come in and enjoy an experience that will distinguish as little as may be between those of high and low mental qualities. In one case graduation is a standard held above the mass to which a few may attain by reason of pronounced ability and keen effort. In the other case, it is a standard placed below the mass to exclude the few who are notably incapable. Whether or not a graduate of the high school has power really to think must be determined by other means; its sanctions lie elsewhere.[16]

Nor is this process of our educational deterioration, according to writers of this persuasion, limited to the secondary level. The state university, especially, operating under the same pressures that affect all American institutions has, they say, followed the same downward path. Norman Foerster, for many years a prominent member of the "New Humanist" movement, has attacked, particularly, naturalism (as opposed to humanism); vocationalism; specialism and the multiplication of courses; emphasis upon the mechanics of learning, "credits," and administrative devices; and a sentimental attachment to the doctrine of "progress." Nor is the antipathy toward sentimentalism limited to its aspects under the aegis of "progress"; it is manifest toward many of the implications of mass education.

> If higher education is to deserve the name, it cannot be brought within the reach of the ineducable and the passively educable. . . . No doubt the "dumbest of us" do soak up something, but it is patent that the good which they receive is more than off-set by the harm which they receive and which

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[16] *Ibid.,* p. 7.

> they do their fellow students by lowering the standard and the tone of the institution. To see the good and not the harm is a work of sentimentalism, which is quite as rife in the university as in the public. So pervasive is this sentimentalism at times that the very atmosphere of the university seems oppressive with the weight of concern for hopeless inferiority, as if it were an intellectual sick-chamber.[17,18]

In its healthy state, says Foerster, higher education is concerned with the fit, the large number of robust young men and women who are able to think, able to feel, able to liberate themselves. The mind that is capable of enough liberal education to justify the effort is not rare. If it seems uncommon in the university today, this is because it is stunted or warped by immersion in the low-average of job-hunting students, by financial stringency and the distraction of earning one's way, by a faculty that feels obliged to deal with average students as they actually are, and by curricula that take vocations seriously and culture frivolously. With true humanistic predilection Foerster dwells upon individual excellence as it may be achieved through a really ''liberal'' education. Though man may be dependent upon social organization he is always superior to it, and education should concern itself first with making him, not a citizen, a professional man, or an expert of any kind, but a man.

It is the same basic concept adopted by Everett Dean Martin. Education in the true sense, he says, is directly and immediately useless.

> It is a kind of living which is of value for its own sake, a personal achievement which possesses intrinsic worth. It is not *for* anything. To subject it to an ulterior end—citizenship, efficiency, the economic emancipation of the working

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[17] One is reminded of McAndrew's use of the same figure on the other side of the argument. See *ante,* p. 421.

[18] Norman Foerster, *The American State University* (Chapel Hill: University of North Carolina Press, 1937), p. 184.

class, increased income; or to educate people for ''character,'' or to perpetuate a religious faith, or any other purpose however good, is to make education a means to something quite irrelevant.[19]

Martin attacks four national characteristics interfering with our more complete attainment of liberal education; namely, our genius for organization, our utilitarianism, our cleverness in finding shortcuts to the ends we seek, and our tendency to use propaganda.

PRAGMATISM IN EDUCATION

Both literary humanism and idealism find themselves in opposition to materialistic naturalism. But Dewey insists that man can never divorce himself from the natural. ''Man's home is nature; his purposes and aims are dependent upon natural conditions.'' The doctrine of biological development shows that ''man is continuous with nature, not an alien entering her processes from without.'' Dewey has no more sympathy for the dualism of literary humanism than for any other doctrine that combats the idea of unity in experience. ''In truth, experience knows no division between human concerns and a purely mechanical physical world.'' Therefore, in education, there should be no artificial division between science and life. Science itself should be broadly humanistic, and hence the natural and effective approach is by way of applied science, ''cases of science in action.''

The opinion sometimes advanced that it is a derogation from the ''purity'' of science to study it in its active incarnation, instead of in theoretical abstraction, rests upon a misunderstanding. As a matter of fact, any subject is cultural in the degree in which it is apprehended in its widest possible range of meanings. Perception of meanings depends upon

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[19] E. D. Martin, *The Meaning of a Liberal Education* (New York: W. W. Norton and Co., 1926), p. 43.

> perception of connections, of context. To see a scientific fact or law in its human as well as in its physical and technical context is to enlarge its significance and give it increased cultural value. . . . The important thing is that the fact be grasped in its social connections—its function in life.[20]

Here are all the premises of pragmatism at work on educational subject matter. It is naturalistic. To separate any realm of knowledge from its background in nature (for man can not be so separated) is a false divarication. Education, therefore, must begin in the life-sphere of the child; it will have meaning for him in terms of his own thinking and his own environment. It will ''make a difference.'' It will be socialized. And it will, of necessity, embrace the practical. It is not strange, therefore, that the vocational aspects of education are dealt with carefully and sympathetically.

Throughout his treatment of education, Dewey evinces his antagonism toward the assumption of social as well as intellectual superiority. He traces the historic origin of the dualism ascribing a ''higher'' value to certain types of study and argues against its undemocratic outcomes in education. Therefore, vocation looms large in all modern social considerations, and must receive a place in educational thinking. But it should be noted that Dewey has a broader definition for vocation than that which centers in the ''narrowly practical'' or the ''merely pecuniary.''

> It is, rather, such a direction of life activities as renders them perceptibly significant to a person, because of the consequences they accomplish, and also useful to his associates. The opposite of a career is neither leisure or culture, but aimlessness, capriciousness, the absence of cumulative achievement in experience, on the personal side, and idle display, parasitic dependence upon others, on the social side. Occupation is a concrete term for continuity. It includes the development of artistic capacity of any kind, of special scientific

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[20] John Dewey, *Democracy and Education* (New York: The Macmillan Co., 1916), p. 333.

> ability, of effective citizenship, as well as professional and business occupations, to say nothing of mechanical labor or engagement in gainful pursuits . . . an education which acknowledges the full intellectual and social meaning of a vocation would include instruction in the historic background of present conditions; training in science to give intelligence and initiative in dealing with material and agencies of production; and study of economics, civics and politics, to bring the future worker into touch with the problems of the day and the various methods proposed for its improvement. Above all, it would train power of readaptation to changing conditions so that future workers would not become blindly subject to a fate imposed upon them.[21]

Such a definition follows logically from Dewey's attitude toward ''labor and leisure,'' and toward ''intellectual and practical studies.'' The Greek social cleavage between free men and slaves has been abolished, but the cleavages between the learned and the unlearned, between leisure class and laboring class remain with us, and become, he feels, the basis of serious fallacies in educational thinking.

> The idea still prevails that a truly cultural or liberal education cannot have anything in common, directly at least, with industrial affairs, and that the education which is fit for the masses must be a useful or practical education in a sense which opposes useful and practical to nurture of appreciation and liberation of thought. . . . The result is a system in which both ''cultural'' and ''utilitarian'' subjects exist in an inorganic composite where the former are not by dominant purpose socially serviceable and the latter are not liberative of imagination or thinking power.[22]

Thus Dewey attempts the truly liberal mission of pulling these points of view together, and sixteen years after the sentences quoted above were written he was still pointing to this kind of synthesis as ''The Way Out of Educational Confusion'':

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[21] *Ibid.,* pp. 358-72.

[22] *Ibid.,* p. 301.

> A reorganization of subject-matter which takes account of out-leadings into the wide world of nature and man, of knowledge and of social interests and uses, cannot fail save in the most callous and intellectually obdurate to awaken some permanent interest and curiosity. Theoretical subjects will become more practical, become more related to the scope of life; practical subjects will become more charged with theory and intelligent insight. Both will be vitally and not just formally unified.[23]

THE IDEALISM OF H. H. HORNE

As a companion text to Dewey's *Democracy and Education,* Professor H. H. Horne published in 1936 a volume entitled *The Democratic Philosophy of Education.* In it he attempts to simplify and summarize the older book, chapter by chapter, devoting a considerable space to ''comment,'' in which he makes many shrewd criticisms and, on the issue of an underlying philosophy, parts company with Dewey entirely.

For example, in connection with vocationalism, Horne says:

> In this case the effect of the meaning given the term is so to widen it that vocational education will be equivalent to liberal and vocational education. This is to beg the question at issue by initial definition. The only activities excluded by the definition of vocation would be the personally insignificant and the socially useless. . . . Of course if one's vocation is defined as being fully human, then all education is vocational, without quarrel. But when ''vocational'' includes everything worthy and excludes nothing worthy, it has ceased to be meaningful and useful as a term.[24]

It was Dewey's purpose, obviously, to show how broad may be the ramifications of vocation and to point out its vital significance in all phases of living and education. Most educators would find little to quarrel with here, for it avoids the errors and excesses against which most defenders of liberal training expostulate, and expands the meaning of vocation to fit some of its significant developments in modern American life. It is a remarkable anticipation of present-day needs in education, including higher education, and should be re-read by extremists of both technological and liberal-arts varieties.

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[23] John Dewey, *Inglis Lectures in Secondary Education* (Cambridge: Harvard University Press, 1931), pp. 38-39.

[24] H. H. Horne, *The Democratic Philosophy of Education* (New York: The Macmillan Co., 1936), pp. 432-33.

More significant is Horne's definite treatment of idealistic and pragmatic positions:

> It should be noted that the values of life are held by Dr. Dewey to inhere in certain forms of human experience. A natural process apart from man lacks value, as it lacks reason. It is amenable to man's production of value but it has no value in itself. Thus values are humanly, socially subjective; they do not inhere in nature beyond man.[25]

Later he explains the contrasting idealistic point of view:

> Instead of making value man-centered, it might well be made reality-centered. In this case the intelligent liking of man does not create value so much as discover pre-existent value. So man's education would be a process of realizing values already inherent in the universe of reality. Man does not create logical truth, emotional beauty, and ethical worth; he discovers them, and re-creates them in individual thought, feeling and conduct. Man not only makes value, he discovers and uses it. This view enriches not only human experience but the universe itself. And it solves the intellectual difficulties inherent in the theory of socially subjective values.[26]

Characterizing other of the qualities of Dewey, he concludes, once more on the idealistic note:

> It is evident that Dr. Dewey's prime interests are scientific rather than humanistic,[27] social rather than personal, economic rather than literary, and naturalistic rather than

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[25] *Ibid.,* p. 324

[26] *Ibid.,* p. 325.

[27] Against this use of the word Dewey would, of course, protest. See *ante,* p. 419.

transcendental. It seems not to be given to any thinker to be adequately synthetic of all the values of life. This suggests the logical demand for *an absolute knower.*[28]

Finally, in the brief concluding section that he entitles *L'Envoi,* Horne indicates other shortcomings:

> One misses in this volume a theory of feeling. There are theories of knowledge and of morals but none of feeling. . . . The home as an educational institution is neglected. . . . There is likewise no adequate recognition of education for leisure. . . . The failure to appreciate the significance of personality is one of the striking features of this philosophy. . . . The naturalistic view of intelligence is both inadequate in itself and insufficient as a basis of school procedure. It is inadequate in itself because the course of nature is not its own object; yet it is the object of intelligence.[29]

Horne has developed his own philosophy more fully elsewhere,[30] but his attitude is consistently that of the idealist, the transcendentalist, and the absolutist.

PROGRESSIVISM IN EDUCATION

The relation of progressive education to pragmatism is demonstrated in the opening chapter of a book written only a few years after the first-named movement had been initiated.[31] Although he apparently does not know that philosophy is not all idealistic, nor conservative, nor absolutistic, the author is persuaded of the necessity of scientific thinking in education in contrast to that which he calls philosophic thinking. According to scientific thinking proof of correctness lies in the "workability of the results when they are applied in ways useful to mankind,'' it reognizes only relative values, and it reveals the world of nature ''as force working through mechanism.'' Applications of this scientific thinking result in many principles, but the four most important are: (1) ''The material which is used in the process of growth is taken, seized, appropriated from the surroundings in which 'a life' finds itself.'' Hence, ''a progressive school is one in which every pupil finds available material for growth.'' (2) ''All growth is the result of the self-activity of vital force.'' Thus, we have ''*self-education* in the midst of surroundings that we have prepared with a view to furnishing the conditions favorable for wholesome growth.'' (3) ''Personality has developed by way of human relationship.'' The conclusion is, therefore, that ''. . . education must be a socialized process, one in which pupils are themselves fashioning and refashioning their school life with the conscious purpose of making it one in which all may participate to their fuller self-realization.'' (4) ''What it is possible for an individual life to become is determined, foreordained by the character of the cells in whose union it had its beginning. What it does become depends upon the surroundings in which it happens to find itself.'' This assumes, therefore, that ''each pupil differs from every other in important particulars and that it is for the interests of society as well as of the individual that each personality retain and cultivate his individual capacities.''[32]

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[28] *Ibid.,* p. 450. (Italics not in the original.)

[29] *Ibid.,* pp. 530-32.

[30] See his *Philosophy of Education* and his *Idealism in Education.*

[31] George A. Mirick, *Progressive Education* (Boston and New York: Houghton Mifflin Co., 1923).

In one of its brochures the Progressive Education Association has said: ''The educator whose work has most profoundly influenced the movement is John Dewey. It was he who first saw clearly the implications of the sciences of life and realized the need of applying scientific method in the reconstruction of education.'' The seven principles around which the association was organized in 1919 were set down as:

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[32] *Ibid.*, pp. 147-50.

Freedom to develop naturally.
Interest, the motive of all work.
The teacher a guide, not a taskmaster.
Scientific study of pupil development.
Greater attention to all that affects the child's physical development.
Co-operation between school and home to meet the needs of child life.
The progressive school a leader in educational movements.

Three emphases have developed to greatest length from these principles, namely, those upon freedom, upon activity, and upon interest. Such emphases immediately raise the question of discipline, of course, and here the statements of Mirick are again significant. Some of his more fundamental theses are:

1. All the causes that produce cases of discipline in school are fundamentally natural and right desires.
2. The pupil himself is not responsible for them—we all have the same desires.
3. A pupil cannot tell what he *wants* when he is disorderly. The most insistent wants are hidden in his muscles, bones, vital organs, and nerve tissues. . . .
5. External "shunting" or change in direction of energy is better than coercion.
6. Self-direction, due to re-evaluation of satisfactions, is best of all.
7. This is best secured by changing the conditions so that there may be opportunities and incentives for experiencing a new and more desirable kind of satisfaction.
8. A disorderly boy or girl, one who does not "play the game according to the rules," should be thought of as a "patient." . . .
11. Disciplinary measures should not be thought of as punishments, for no *sins* have been committed. They should be thought of, rather, as remedies in a process of rectifying maladjustments.[33]

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[33] Mirick, *op. cit.,* pp. 199-200.

These pronouncements, however, should be supplemented by the statement of the author, immediately following, that he believes,

> as a practical matter, force is properly used as an element in the experimental treatment of some cases of discipline. . . . There can be no school unless there is an orderly school life, and among children, as among adults and nations, there will be one now and then who will find his satisfaction in lawlessness and disorder . . . so let no young teacher begin her work in school with the idea that the "little dears" are too nice to be naughty, or that the older children are "such ladies and gentlemen" that they need no control. This is perhaps the most dangerous folly that can possess a teacher's mind.[34]

This caution of the practical and experienced teacher exemplifies the attitude of the sound progressive everywhere. It is the novice and the extremist in the progressive movement that have brought upon it the most embarrassing criticisms. Dewey himself has not hesitated to attack the extremists in vigorous language; for example, in such a passage as:

> In some progressive schools the fear of adult imposition has become a veritable phobia. When the fear is analyzed, it means simply a preference for an immature and undeveloped experience over a ripened and thoughtful one; and it erects into a standard something which by its nature provides no steady measure or tested criterion.
>
> Schools farthest to the left (and there are many parents who share the fallacy) carry the thing they call freedom to the point of anarchy. Ultimately it is the absence of intellectual control through significant subject matter which stimulates the deplorable egotism, cockiness, impertinence, and disregard for the rights of others apparently considered by some persons to be the inevitable accompaniment, if not the essence, of freedom.[35]

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[34] *Ibid.*, p. 201.

[35] *Elementary School Teacher*, IV:193-204. Reprinted in *Journal of the National Education Association*, XVIII (1929), 287.

And Boyd H. Bode, another important older figure in the progressive movement, has recently rebelled against certain present-day educational tendencies. One of his criticisms that would delight the heart of any ''New Humanist'' reads:

> The failure to emancipate ourselves completely from Rousseauism and the instinct psychology is responsible for most, if not all, of the weaknesses of the progressive movement in education. The attitude of superstitious reverence for childhood is still with us. The insistence that we must stick uncompromisingly at all times to the ''needs'' of childhood has bred a spirit of anti-intellectualism, which is reflected in the reliance on improvising instead of long-range organization, in the overemphasis of the here and now, in the indiscriminate tirades against ''subjects,'' in the absurdities of pupil planning, and in the lack of continuity in the educational program. It has frequently resulted in an unhealthy attitude toward children, an attitude which suggests that there is no such thing as a normal child, and that we must be everlastingly exploring his insides, like a Calvinist taking himself apart day after day to discover evidences of sin.[36]

It is interesting to hear men like Dewey and Bode strike out in this manner against the follies of modern American education, and yet some of these tendencies, such as emphasis upon the here and now, the disregard for standards, the discontinuous as opposed to ''long-range organization,'' lie deeply implicit in a pragmatic philosophy.

THE ESSENTIALISTS

Opposition to some phases of progressivism has become articulate both within and outside the ranks of a particular group known as the ''essentialists.'' The late Michael Demiashkevich used the word as designating those who emphasize the social heritage into which each generation must be inducted in contrast to the ''individualist-pragmatists'' who place emphasis upon assisting the individual to find a happy life in a changing civilization by helping

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[36] Boyd H. Bode, *Progressive Education at the Crossroads* (New York and Chicago: Newton and Co., 1938), pp. 70-71.

> to attain the satisfaction of his interests and inclinations, and to forward his development in the various aptitudes that are satisfying to him, and that are regarded by educational authorities as harmful neither to him nor to society.[37]

Demiashkevich finds both good and bad points about this individualist-pragmatist philosophy. If properly applied it can produce

> the vitalization or vivid meaningfulness of school work, as a consequence of challenging and encouraging the individual interests and aptitudes of the learner; a more satisfying and consequently more retentive learning; a more cheerful outlook upon life, nourished by happy, unhampered growth.[38]

But he finds, also, some serious defects in this attitude, for it may result

> in an educative process characterized by such negative features as exaggerated individualism and non-conformity, inadequate training in fundamentals, lack of balance in self-expression and insufficient self-control on the part of the learner, a dangerously large and self-defeating emphasis upon the individual's right to happiness and a dangerously small emphasis upon his duty to contribute to the happiness of the group, an exaggerated egoism and hedonism or love of pleasure.[39]

The best concise statements of the position of the essentialist are to be found in the work of William C. Bagley,[40] who boldly maintains that, despite its extent and heavy cost, "public education in the United States is in many ways appallingly weak and ineffective," and gives as outstanding evidences the fact that, first, "age for age, the average pupil of our elementary schools does not meet the standards of achievement in the fundamentals of education that are attained in the elementary schools of many other countries." (In substantiation of this point the author cites results of American achievement tests used in Canada and Scotland compared with results in American schools.) Second, "it is generally agreed among competent students of the problem that our average 18-year-old high-school graduate is scholastically far behind the average 18-year-old graduate of the secondary schools of many other countries," and here the writer alludes to the growing necessity for remedial reading classes, the weaknesses reported in basic arithmetic, and the generally accepted requirement on the part of high school teachers of Latin and modern languages to teach the rudiments of English grammar in order to make their other work possible. Third, "while no causal relationship is claimed, it is well to know that during the one hundred years in which universal elementary education has been increasingly the policy of all civilized countries, ours is apparently the only country in which the expansion of the universal school has not been paralleled by a significant and in some cases a remarkable decrease in the ratios of serious crime."

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[37] M. Demiashkevich, *Introduction to the Philosophy of Education* (New York and Cincinnati: American Book Co., 1935), p. 6.

[38] *Ibid.*

[39] *Ibid.*

[40] See "An Essentialist's Platform for the Advancement of American Education," *Educational Administration and Supervision,* XXIV (April, 1938), 241-56, and "The Significance of the Essentialist Movement in Educational Theory," *The Classical Journal,* XXXIV (March, 1939), 326-44.

Bagley sees many social and economic factors contributing to the present educational situation and in the second of the articles listed takes full account of the "vast upward expansion of the universal school." Essentialists, he maintains, are proud of this great extension of privilege. ("Our high-school and college enrollment probably equals or exceeds in absolute numbers the enrollment in institutions of the same grade in all other countries combined.") But they are also convinced that it has resulted in the lowering of standards and rigor to a greater degree than the situation demanded. Among the practices that sprang up as a result are: abandonment of all standards for promotion and the passing of all pupils "on schedule," the enthronement of the doctrine of "incidental learning," the substitution of "activities" for systematic and sequential learning, the discrediting of "exact and exacting studies," the increasing emphasis upon "education for citizenship" as a substitute for "fundamental premises and postulates wrought in the agony of hard thinking," the indoctrination of miniature learners, and the "vagaries" of curriculum revision.

Effective democracy, he contends, requires a community of culture, and there can be little question as to the essentials. Among them he lists: "the arts of recording, computing, and measuring," "knowledge of the world beyond one's immediate experience," "a speaking acquaintance with man's past and especially with the story of one's own country," "the heritage from invention and creative art," "the inculcation of health practices," "the elements of natural science," the fine arts, and the industrial arts. And he quotes Charles A. Beard approvingly:

> While education constantly touches the affairs of the hour and day, and responds to political and economic exigencies, it has had its own treasures heavy with the thought and sacrifice of the centuries. It possesses a heritage of knowledge and heroic examples—accepted values stamped with the seal of permanence.[41]

Thus the attitude of the essentialists may be regarded as a reaction against a reaction. Progressivism rebelled against the static and rigid order of "lock-step" education of a quarter of a century ago. Now in turn progressivism is held responsible for other types of weakness. It is an interesting conflict.

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[41] C. A. Beard, *The Unique Function of Education in American Democracy* (Washington: National Education Association, 1937), p. 71.

TRENDS IN MODERN WESTERN THOUGHT

Modern education, however, is not to be represented entirely by a series of conflicts. Reflecting modern thought, it has made some progress toward unification of old values and new science, particularly in the direction of a concept known as organism or organicism. But to understand this trend it will be necessary first to trace certain recent changes in Western scientific and philosophic ideas.

Since the Middle Ages at least five steps in the history of Western thought may be listed as having profoundly influenced the human outlook upon values. First was the cosmological revolution that came about with Copernicus and Galileo. Man has had to shift from a position at the center of a cosy little creation to one on a bit of matter thrown off more or less accidentally from a second-rate star in a universe to be imagined only in terms of trillions of light-years. Second came the studies of Descartes and Newton, reducing this cosmos to one of mathematical and mechanical law. Concepts of any relationship between God and man were from that moment profoundly altered. Third, the introduction of empirical method and its philosophy by the two Bacons, John Locke and all Western science. Truth was to be found not by reasoning only, but by experimenting and testing. Fourth, the concept of cosmic and organic evolution. The universe was not to be conceived merely as aggregations of suns revolving since creation upon fixed orbits, but as a product of long processes of development. And, finally, since the turn of the present century, the inter-relation of all natural phenomena, including man, the reduction of the universe to manifold forms of a basic energy, and the concept of emergence.

The Origin of Species was published in 1859. In the relatively brief ensuing period the thinking of the Western world as to the fundamental nature and meaning of the universe has been profoundly affected by its theory. When the attempt was made to apply the general idea of evolution to almost every field of human knowledge, in the last century, some of the results were grotesque; but it can safely be said that the idea of evolution in the field of philosophy has had significant outcomes.

Henri Bergson, the famous French philosopher, was born in the year of the publication of Darwin's book.[42] In 1888 he first gave expression to what Professor Hocking has called ''an intellectual conversion,'' arguing that real time is something to be intuited only by knowledge of the inner self, not by way of the senses. From this point he went on to the development of a concept that ultimately the whole universe can best be understood by reference to the phenomenon of life, underlying not only that which we refer to as mind, but also that which we call matter. Life is a great pent-up power or impetus, the *élan vital,* universal, creative, always active, though reaching different degrees of free expression. Matter is a sort of slag or by-product, a falling back from the heights of creative effort, while man represents the highest crest of the wave yet reached. Throughout there is process, struggle, the emergence of new forms, and withal, progress.[43]

As early as 1875 George Henry Lewes distinguished between ''emergents'' and ''resultants'' in nature. The latter can be foretold; they are effects of known causes. But emergents are in the nature of new modes or qualities that appear unpredictably. Lloyd Morgan and Samuel Alexander, employing this concept, in 1920 and 1923 published in England books[44] developing the theory of basic and creative space-time from which have ''emerged'' entities of successively higher attributes, until finally we reach matter, then life, and finally mind. That is, life and mind are modes of being that appear when certain organizations of the original ''point-instants'' occur in the universe. Behind all is the *nisus,* or drive toward creativeness, and beyond is a quality still higher than mind as we now know it—deity—toward which the whole process goes on.

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[42] As was John Dewey.

[43] A somewhat similar position is taken by the German thinker, Rudolph Eucken. See his *Main Currents of Modern Thought.*

[44] Samuel Alexander, *Time, Space and Deity* (1920); Lloyd Morgan, *Emergent Evolution* (1923); see also, *Evolutionary Naturalism* and *The New Rationalism,* respectively by R. W. Sellers and E. G. Spaulding, two American philosophers, for other realistic treatments involving evolution.

A third and different concept has been fashioned by General J. C. Smuts, in a philosophy of holism, which he defines as

> the ultimate synthetic, ordering, organising, regulative activity in the universe which accounts for all the structural groupings and syntheses in it, from the atom and the physico-chemical structures, through the cell and organisms, through Mind in animals, to Personality in man. The all-pervading and ever increasing character of synthetic unity or wholeness in these structures leads to the concept of Holism as the fundamental activity underlying and co-ordinating all others, and to the view of the universe as a Holistic universe.[45]

Finally, in a treatise that is more difficult to follow than any of those cited, A. N. Whitehead has developed a synthesis of perhaps even profounder meaning.[46] Whitehead commences with the world of science, the objective world of the realist. He distrusts subjectivism for several reasons, one of them being the position of most modern scientists, who find they must deal with a world and a universe that existed before man and his mind appeared on earth. And although Whitehead recognizes the importance of the individual percipient in all scientific observation he can not ''understand how a common world of thought can be established in the absence of a common world of sense.'' Beginning, then, with this world of sense, he follows physics in reducing each primordial element to "an organized system of vibratory streaming of energy." But this places a new problem before philosophers and physicists, for then elements, "apart from being a periodic system," would have no existence, and this opens the field

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[45] J. C. Smuts, *Holism and Evolution* (London: Macmillan and Co., 1927), p. 326.

[46] A. N. Whitehead, *Process and Reality.* Fortunately for the average reader he formulated the elements of this system in simpler form in his earlier volume, *Science and the Modern World.* It is this book that is followed here.

> for the introduction of some new doctrine of organism which may take the place of the materialism with which, since the seventeenth century, science has saddled philosophy. It must be remembered that the physicists' energy is obviously an abstraction. The concrete fact, which is the organism, must be a complete expression of the character of a real occurrence. Such a displacement of scientific materialism, if it ever takes place, cannot fail to have important consequences in every field of thought.[47]

One of these consequences is that it makes the concept of materialism apply only

> to very abstract entities, the products of logical discernment. The concrete enduring entities are organisms, so that the plan of the *whole* influences the very character of the various subordinate organisms which enter into it. . . . thus an electron within a living body is different from an electron outside it, by reason of the plan of the body. The electron runs blindly either within or without the body; but it runs within the body in accordance with its character within the body; that is to say, in accordance with the general plan of the body, and this plan includes the mental state. But the principle of modification is perfectly general throughout nature, and represents no property peculiar to living bodies.[48]

Whitehead undertakes to trace the changes wrought by modern science in men's thinking through poetry. (Here is a philosopher who knows science, mathematics, and poetry!) He contrasts Milton's confident announcement that his task was to ''justify the ways of God to man'' with Tennyson's perplexity as shown in the opening lines of *In Memoriam* where faith and faith alone must be one's refuge in ''believing where we cannot prove.'' But in this growing confusion Whitehead discovers two voices—those of Wordsworth and Shelley—whose expression comes near his own feeling for nature. In Wordsworth's *The Prelude* he finds many passages ''exhibiting entwined prehensive unities, each suffused with modal presences of others,'' and suggests that modern science imposes a strained and paradoxical view of nature upon us. ''Is it not possible,'' he asks, ''that standardized concepts of science are only valid within narrow limitations, perhaps too narrow for science itself?'' Whitehead will not permit his philosophy to be delimited by ''man'' even in the generic sense nor by space and time. A consideration of the ''general flux of events leads from this analysis into an underlying eternal energy in whose nature there stands an envisagement of the realm of all eternal objects,'' where envisagement of all values must also stand. But by value he means ''the intrinsic reality of an event'' and hence ''no value is to be ascribed to the underlying activity as divorced from the matter-of-fact events of the real world.''

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[47] A. N. Whitehead, *Science and the Modern World* (New York: The Macmillan Co., 1926), p. 131.

[48] *Ibid.,* pp. 115-16.

This concept of wholeness and organism contains significant suggestions for education as well as for philosophy. Insofar as it points the way to synthesis it cannot fail to ameliorate the confusion of our institutional thinking. Nineteenth century science has fastened materialism upon the modern mind, both because of its theories and its applications. And in America that tendency has been amplified because it accompanied and intensified the results of continental conquest. Since the turn of the century there has been an increasing emphasis upon humanism, both that growing out of empiricism and that evolving from classicism. One branch of this thinking has stressed the social, the other the individualistic; neither has included the metaphysical. The Romantic Period in Europeon literature was a protest against the materialistic, but it did not comprehend that which it revolted from. Today the solution lies not in the direction of revolt so much as in the direction of organized inclusiveness—that is, once more, synthesis.

Whitehead has said some significant things about education, but in desultory fashion. However, in a chapter on "Requisites for Social Progress,"[49] he points out several evils that have resulted from the domination of physical science in modern thinking. One of these is the lack of reverence in our dealing with nature. In the past too many works of engineering have been allowed to disrupt the natural beauty of their setting. Another is the tendency to ignore the relation between organism and environment. "The whole is lost in one of its aspects." This means that specialized functions in our lives are performed better, but co-ordination, especially in its broadest phases, is poor. In education, this has resulted in unbalanced specialization. Professions make progress, but each in its own groove.

> Thus in the modern world, the celibacy of the medieval learned class has been replaced by celibacy of intellect which is divorced from the concrete contemplation of the complete facts. . . . The leading intellects lack balance. They see this set of circumstances, or that set; but not both sets together. . . . Wisdom is the fruit of a balanced development. . . . The type of generality, which above all is wanted, is the appreciation of variety of value. I mean an aesthetic growth. There is something between the gross specialized values of the mere practical man, and the thin specialized values of the mere scholar. Both types have missed something; and if you add together the two sets of values, you do not obtain the missing elements. What is wanted is an appreciation of the infinite variety of vivid values achieved by our organism in its proper environment.[50]

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[49] *Ibid.,* pp. 277 ff.

[50] *Ibid.,* pp. 283-86.

Whitehead has avoided the extreme position of the empiricist who wishes to limit his problem to the objective world and attack it by scientific method, but he has also avoided the extreme position of the absolutist who wishes to interpret all ''heres and nows'' purely in terms of ultimate value. Value, he tells us, can come about only through objectification in the here and now.

Such an emphasis gives new significance to the individual. He becomes the locus of the emergence of value in a form that, to us as human beings, appears to be at the top of the evolutionary scale. As such an agent or vehicle man reaches a new dignity, but only as he emerges from the universe of which he is a part. The potentiality of such value resides in that universe, but the value does not arrive until man arrives and expresses it. Such attainment is sometimes regarded as the end or ''final cause,'' so to speak, of all organisms.[51] However, the same point of view can be taken toward the social organism. The organismic qualities of the social group have been remarked upon by philosophers from Plato's time on. It is the social organism acting co-operatively and cumulatively, that achieves civilization. Any human being has access to all the recorded values of civilization in so far as he is able to avail himself of them. His success as a civilized being is to be measured in part by his ability to derive sustenance from that organism, by way of comprehension and appreciation, in part by his ability to make contribution to it. But individual and social organisms are always part of the larger organism we call the universe, and organic interpretation involves relationship between smaller and larger. Such a philosophy transcends the philosophy of John Dewey notably in one respect; it involves the metaphysical. Dewey has written with superb constructiveness on the social plane; Whitehead has risen to a broader plane.

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[51] See William Windelband, *An Introduction to Philosophy*, tr. by Joseph McCabe, pp. 144-46.

DYNAMIC AND "ORGANISMIC" EDUCATION

A few formal attempts have been made to introduce "organicism" into educational theory, but the more elaborate are likely to give the impression of cultism. A. Gordon Melvin, for example, has published a study[52] that contains some stimulating suggestions and penetrating criticisms of modern thinking, though accompanied by a good many judgments obviously based upon no more than enthusiasm. He points out that "to be organic is to be dynamic," and stresses the importance of dynamic thinking. Here he pays tribute to the thinking of James and Dewey and their beginnings toward dynamic pragmatism, which

> clears the decks for action. It rejects incompatible dualisms, such as mind and body, as having their origin in epistemological or metaphysical error. By a sort of intellectual metallurgy it amalgamates polar concepts. It harmonizes contradictories which paralyze action.[53]

That is, rather than the old Aristotelian logic, which makes for complete severance, or opposition between two poles of thought, a newer dynamic mode is urged, whereby a continuous relationship between the two poles is maintained. This train of thinking also has a place for what are called "relative absolutes" and a final "Relative Absolute." Following Comenius, Pestalozzi, Froebel, Parker, and the "living" parts of Dewey, a school

> will be progressive indeed. If on the other hand a teacher approaches Dewey, blind to fundamental values, unoriented to life, history and philosophy, he may suffer from what may be the blind leading of the blind. His school may become the bedlam of despair.[54]

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[52] Under the rather ambitious title, *The New Culture* (New York: John Day in association with Reynal and Hitchcock, 1937).

[53] *Ibid.*, p. 32.

[54] *Ibid.*, p. 34.

Education, says Melvin, should dedicate itself to the creation of a ''vast human dynamic'' to replace our present absorption in a material dynamic. Our contemporary conquests in science have resulted partially from the older concepts of knowledge. We have built a dynamic environment, but have remained static in our thinking of ourselves.

Much of this is irritatingly vague and consists in broad generalizations without any pretense at close reasoning. Nevertheless, there are emphases worth pondering. The phrase ''relative absolute'' is a self-contained contradiction, but ''dynamic absolute'' (a phrase he also approves) has something to recommend it. It is at least a groping toward principle, and the recognition of its necessity. And it bids fair, as it involves concepts of the organic and of wholeness, to become significant in other fields besides philosophy. Hans Driesch struck out in this direction as early as 1908.[55] In psychology the movement manifests itself in Gestaltism; in biology, in such work as that of Kurt Goldstein,[56] wherein Gestalt psychology is juxtaposed to certain biological concepts; in logic and mathematics; and in some of the social concepts of Ortega y Gasset and Pareto.

SOME IMPLICATIONS OF ''WHOLENESS''

The conditions of human life are so cast that periodic reinterpretations of its meaning are imperative. (And to deprive it of meaning is to destroy its human quality.) No generation and certainly no individual can speak the final or the adequate word. But the ideal must continue to be the interpretation of the whole; and this is peculiarly true in education. Western civilization has been busy through several generations breaking the bonds of old interpretations conceived as final. That period of iconoclasm has worked, in the main, negatively, only clearing the ground. And in the ardor of attack it has lost sight of rebuilding in terms of wholeness. The early chapters in this volume have indicated some of the impacts of science upon modern thinking. As shown there, modern man bears a relation to nature more intimate and fundamental than ever before conceived, though the early Ionians glimpsed it crudely. At the same time we are beginning to learn new laws of his functioning both as an individual and as a member of a social group. Today we need the assessment of these scientific thought-structures in relation to older thinking and older values. The race, as certainly as in the past, will not consent to live in continued confusion. If new and worthy concepts are not forthcoming, it will cling to old and inadequate patterns of thought or adopt dangerous new answers proffered by false prophets.

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[55] See his *Science and Philosophy of Organism.*

[56] *The Organism* (New York and Cincinnati: American Book Co., 1939).

Wholeness, educationally, has many implications. It envisions the *whole* individual man, the *whole* race of man, past, present, and future, the *whole* world of nature of which he is a part, and the *whole* universe. For the past two thousand years education has been concerned with *phases* of human life—man's past political, or literary, or philosophical achievements, man's natural environment, man's religious biases, man's individuality, man as member of society, man as wage-earner, man as technician, man as ruler or subject, man as lost or redeemed. Modern science explicitly denies the ambition to "see life whole." Pragmatism, born of science, makes the same denial. Romanticism and sentimentality are inherently one-sided; every "ism" by its nature is concerned with emphasis or emphases. And in the complexities of life it is to be admitted that virtually every individual and every institution will of necessity be concerned with particular things and ideas. The point is that somewhere, to make life adequate, we must have both individuals and institutions concerned with the "over-view." Religion can sometimes fulfill the mission, but unhappily, religion ceases to perform its principal function for many people when it ceases to be dogmatic. Education and educators with vision must take up the responsibility.

In the process of emerging from our old literalistic standards to the methods of science, but still clinging to our romanticisms, we find ourselves in education today lacking one great stabilizer present in neither science nor romanticism; namely, spirituality. By spirituality as here used is meant the human resultant from a long-range approach to human values. It may be employed in any field of thought, but it concerns itself deeply with all human experience, as sifted by human critical faculties, and hence inevitably, along with present experience, finds importance in principles and standards as they occur through the history of human thought, feeling and aspiration. Two philosophies have been eclipsed in the gradual emergence of pragmatism and romanticism; that is, idealism and humanism. In them, this quality of spirituality received definite stress. And in order to reach any kind of wholeness or synthesis in education that element, through some means, must be restored. As here conceived it may perhaps best be elaborated through consideration of terms in the area of human appreciations.

In the highest types of beauty, for example, there must always be something in addition to sounds, light, shadow, texture, words, and images. We may call it organization or integration. By it raw materials are shaped into patterns; and it is the possession of this power in large measure that sets the artist apart from the ordinary mortal. ''This painting, this sonata, this sonnet, each is a little cosmos—or a large one.'' Plato was fearful of several of the arts because of what he felt was a tendency to transgress in the direction of the sensuous. Young critics have a word for the merely tuneful and sentimental in music; and they might well introduce another word for the current purely rhythmic music, with nothing but sense appeal. But great art never offends in these ways; it avoids both the surfeiting and the insipid. Discriminating, truly educated persons recognize and delight in the highly beautiful; they are offended by the sentimental or the purely sensuous.

Similarly in the word *nobility* more is implied than a quality of mere goodness. It contains the added element of measured and restrained power. And here again there is absence of sentimentality. Sympathy there may be, even tenderness, but also dignity, achieved through knowledge, through having probed deeply, through having looked far beyond immediate considerations. Its highest forms are distilled out of suffering endured and conquered. As in great art, an air of balance, of self-containment, of insight, pervades it. Some men succumb to difficulty; some override difficulty and become strident or domineering; some, even in the face of insurmountable difficulty or suffering, achieve nobility. It is a quality than can be discovered among all classes and conditions of human beings; but it is rare, because it calls for an extremely difficult kind of wholeness.

In these qualities so interpreted, then, is to be found the implication of completeness through processes of thought, of discernment, of long pondering upon human values. And this way lies the spirituality that from Greek times to the present has inhered in man's finest aspirations and achievements. Such an attitude can have no antagonism toward science; science may easily become the source of some of our deepest insight. But, on the other hand, it does not discard the interpretations of great artists, seers, and poets of the past. History, philosophy, art, and religion, as well as science, contain human treasures by which as educated men and women we are to assess human values, though always critically. There is nothing softer or more sentimental about this assessment than about the scientific approach. It impels attention toward both the light and the shade in man's past. It knows enough of that past to recognize him as a mere infant upon the planet, an organism among organisms, yet subject to aspirations, curiosities, and capacities that have left a remarkable record. Moreover, perusal of that record soon brings the conviction that those human values esteemed highest are not lightly acquired; they involve long and arduous effort motivated by enduring devotion.

Synthesis in the realm of ideas is not an uprooting or a disruption; it is a kind of intellectual art, an amalgamation of seemingly unrelated elements into a new meaningful organization. Plato linked together the dialectic of Sophistry, the principles of mathematics, and the speculations of cosmology into a great and enduring metaphysics, then Aristotle broadened it further by the inclusion of the beginnings of empirical science. Aquinas undertook to unify the philosophy of Aristotle and the doctrines of the Church. Spinoza brought at least one kind of order out of the confusion of medieval religion staggering under the impact of the idea of a mathematical world. Kant in a similar manner labored constructively where empiricism seemed likely to leave no approach to life but skepticism. Today the philosophies of ''creative evolution,'' ''emergent evolution,'' and ''holistic evolution'' are endeavoring once more to find a way to synthesis and a renewed human spirituality. Any system of education that leaves out such considerations as these is fatally lacking. And it should be obvious that the qualities sought can not be developed by ''spoon-feeding,'' pandering to mere impulse, to short-sighted objectives, to ''thrills,'' to cheap publicity, or to the purely spectacular. But whether the new synthesis in education lies in a technical philosophy of organism or not, most of us who are concerned in a practical manner with the maintenance and development of a system of education will find a partial answer in a thorough-going liberalism that maintains balance and that comprehends much.

Reading List

Brubacher, J. S. *Modern Philosophies of Education* (New York and London: McGraw-Hill, 1939). Chapters 1 and 4.

Demiashkevich, Michaël. *An Introduction to the Philosophy of Education* (New York and Cincinnati: American Book, 1935). Chapter 9.

Doughton, Isaac. *Modern Public Education, Its Philosophy and Background* (New York: Appleton-Century, 1935). Chapters 4 and 13.

Foerster, Norman. *The American State University* (Chapel Hill: University of North Carolina Press, 1937). Chapter 5.

Kandel, I. L. *Conflicting Theories of Education* (New York: Macmillan, 1939). Chapter 1.

Whitehead, A. N. *Science and the Modern World* (New York: Macmillan, 1926). Chapter 13.

XV. AMERICAN CULTURE TODAY AND TOMORROW

THE immensity of such a subject as ''American Culture Today and Tomorrow'' is obvious to anyone who merely looks about him at the American scene. Innumerable diversities crowd into one's mind: a quadrangle on the Yale University campus and the desert wastes of Arizona; a stockbroker in Wall Street and a hermit-prospector in a New Mexico canyon; the celebration of Mass in a Catholic Church in Pittsburgh and the orgies of an old-fashioned revival meeting in Arkansas; the descendants of the Adamses and the ubiquitous Joads; a communion of saints in Illinois and a hysterical, roaring football crowd; the atom-smashers in their laboratories and the cotton-pickers of Mississippi; the nine-year-old children who pack shrimp in our Gulf ports, the riveters on skyscrapers, the ''Hunkies'' and ''Polacks'' of the steel mills, the Norwegians and Germans and Danes who farm some of the Middle West, the ''Crackers'' of Georgia, the elderly rabbis in their skullcaps in New York, the breezy cattleman from El Paso, the movie star from Hollywood, the crooner in the Chicago nightclub. Diversity of race, color, occupation, taste, creed, habits! The poet Whitman loved this variety of landscapes, of men, of races, of manners which is America, and asked us to open our eyes to it and feel its promise.

There is no manageable abstraction America, no norm of American. And yet, despite the diversity, Americans and their critics recognize that American life is standardized. Indeed, that has been a constantly recurring criticism for many years. The paved highway, the radio, the newspaper, the public school, the movie, and many forms of standardized recreational activity are no longer far from anybody. Everybody is tied in some way to the ''money'' culture. Americans get their livings, rear and educate their young, worship their God, spend their leisure, abide by group taboos and engage in rituals in a recognizable twentieth-century American pattern, just as Hottentots do all these things in a recognizable Hottentot pattern. If there were not some patterns, some standardization, any account of American life today would consist of myriad details with no unifying point.

A culture is the whole complex of a people's life habits and activities, attainments, beliefs, traditions, their way of doing things, their social inheritance. Their culture includes devices, skills, and techniques for control of the physical environment. A modern dynamic culture relies heavily upon invention, science, technology, and industry; these things are the tools of civilization. But there are other considerations.

> The manner in which these civilizing instruments are employed and the *ends* for which they are used is determined . . . by another phase of associated experience, a process which may be called ''Culture.''[1]

Culture is ''that complex whole which includes knowledge, belief, art, morals, law, custom, and any other capabilities and habits acquired by man as a member of society.''[2] It is ''supra-individual,'' which is the reason one can, after all, safely generalize about some aspects of it. A culture, according to Wallis, is unique, self-contained geographically; it is a functioning dynamic unit and the various traits which compose it are interdependent. Since these traits are interrelated, an innovation affects the entire culture.[3] The authors of *Middletown,* in studying a characteristic American city, came to see that "the different aspects of civilization interlock and intertwine, presenting—in a word—a continuum."

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[1] Eduard C. Lindeman, *Wealth and Culture* (New York: Harcourt, Brace and Co., 1936), p. 1.

[2] Edward B. Tylor, *Primitive Culture,* I, 1. Quoted in Wilson D. Wallis, *Culture and Progress* (New York: Whittlesey House, 1930), p. 9.

It is a convenient, although perhaps a wishful, thought to hold that in an *integrated* culture, notably a primitive one, the economy, the religion, the social life, and the aesthetic activities achieve unity, so that economic activity has religious and aesthetic overtones, and the religion and daily activities are patterned and enriched by being also aesthetic activities.

> The life of the Indian, on the evidence of his cultural remains, was marvelously unified and socialized. Virtually every form of activity, esthetic, industrial, social, was at the same time the practice of his religion. In quest of food, sitting in council, taking part as musician or dancer or priest in the ceremony, developing the symbolic design on utensil or garment, building the sanctuary, erecting the monolith, dedicating the temple and embellishing it with color and plastic art—he was putting his whole spiritual life into it, and always with the thought of "the people," never of the individual or self. The race has left no personal history—only tribal or communal.[4]

Looking back on the medieval synthesis, some scholars have held[5] that the individual's life in that era, however barren of comforts and conveniences, had a considerable certainty, poise, and direction, since that culture was erected on a clear affirmation of life's meaning, and all the implications of that meaning were forced into the arts, into the social pattern, into religious practices, even into the economic pattern. It is probably only utter romanticists, for whom distance means enchantment, who can take entirely seriously the idea that the American aborigines or the men of medieval Europe lived in a wholly integrated and therefore substantially satisfying culture. Nevertheless, there is in all cultures, even in modern American culture, more of integration, or at least interdependence, than at first meets the eye. Many men's work is routinized; therefore their use of leisure time becomes so. In a modern ''money'' culture, religion, social life, education, the arts, all reflect the mores and values of the basic economic practices. Indeed, the observed interdependence of economics, aesthetics, religion, philosophy, and social life is probably one of the causes why even idealistic philosophers can accept the idea of ''cultural determinism''[6]—the idea that, however rigorous one's philosophizing or deep his desire for cultural, moral, and intellectual self-direction, one's life is largely determined by the intellectual, moral, and social ''climate'' of his age and environment.

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[3] Wallis, *op. cit.,* pp. 10 ff.

[4] Edgar L. Hewett, *Ancient Life in the American Southwest* (Indianapolis: The Bobbs-Merrill Co., 1930), p. 30. Quoted with special permission of the publisher.

[5] Notably, Henry Adams, in *Mont-Saint-Michel and Chartres.*

All things in a culture, then, move together, or if they do not, there is undue dislocation and confusion. An innovation in one field (say, the means of getting a living) affects all other fields—religious beliefs, family, arts, education. Varying rates of change in the various lines of activity also have their effect in creating problems.

Obviously, in a brief chapter on American culture, all facets of culture in the broader sociological or anthropological sense cannot be surveyed. ''Culture'' is used in a narrowed sense to mean those supposedly finer creations of mind or spirit that accompany any people's life—literature, poetry, the fine arts. The purpose of the preceding lengthy introduction is to emphasize that these more specific cultural manifestations are deeply conditioned by the whole culture in the broader sense, and cannot be considered apart from the *milieu* out of which they grow. Indeed, one of the greatest weaknesses of American culture (in the broader sense) is the heretofore generally held view that specific cultural things (in the narrower sense) are non-integral, non-essential embellishments which we may well take care of when we get around to them. This atomic view of society holds that ''the finer things of life'' come by addition or accretion after the sensible things have been taken care of; and it overlooks the important consideration that where there is no concern for the ''finer things'' there may possibly be confusion at the foundation of all those structures which support the sensible things. Put concretely, this means that when the buccaneers of American life in the 1860-1890 era put some of their winnings into art museums, America was not thereby automatically becoming ''cultured''; and it means further that whatever improvement is to be noted now in the cultural awareness of Americans is due, not wholly to the fact of increased leisure and money, but to a shift in values. The American frontiersmen led a sort of denuded, graceless, artless existence for two reasons: (1) because they had not the physical means for the graces; (2) because, having embraced the disruptive, romantic idea of individualism, which was deeply anti-social in some respects, they simply would not have any truck with ''culture,'' learning, or high-hat ways. To deny that the first reason given above was highly important would be to deny the whole concept of cultural determinism; but to deny the second reason would be to deny the whole concept of cultural interdependence. America, so largely explainable in terms of frontier influences, both could not and did not want to get ''culture'' (in the narrower sense). The fact that we have not yet had our share of the ''finer things'' does not mean that we have possessed, in sound condition, all the other accouterments of culture except the aesthetic. It means, rather, that as we begin to pay respect to the aesthetic we find ourselves paying deeper respect and attention to the economic, the social. America is beginning to grow up or mature, all over. Accumulated wealth poured into charitable, research, and educational foundations, or funds supplied by the government, can help us procure the tools for ''culture''; but we will have a culture only as we mature intellectually, achieve soberer and finer taste, socialize ourselves outwardly and individualize ourselves inwardly. For heretofore in American life we have been inclined to be ruggedly individualistic in the very fields where we should have been more group-minded (politics and economics), and sheepishly group-minded in the very field where we should have been individualistic (individual self-cultivation: aesthetics).

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[6] Josiah Royce wrote: ". . . as man is social, as no man lives alone, as your temperament is simply the sum total of your social 'reflex actions,' . . . the great philosopher, in reflecting on his own deepest instincts and faiths, inevitably describes in terms of his system the characteristic attitude of his age and people."—Quoted by Moses J. Aronson, "The Humanization of Philosophy," in *American Philosophy Today and Tomorrow,* edited by H. M. Kallen and Sidney Hook (New York: Lee Furman, Inc., 1935), p. 3.

The concept of cultural determinism, then, and of the interdependence of cultural phenomena is pretty generally accepted. American culture must be estimated ultimately as a characteristically American adaptation to environment; and this culture will be seen as a *whole* response. An important element in the whole culture of a civilized people is, of course, its expression of itself through the fine arts. In the long run, the verdict upon a civilization or culture is drawn quite largely from its achievements in the realm of the arts. Rightly or wrongly, historians assign great importance to ancient Greece because of her eminence in the fine arts of literature, architecture, and philosophy. We estimate a past civilization, in short, by the relative importance of ''culture'' in the whole culture.

But we must not expect that American culture as a whole, or American arts as an element in culture, will quite repeat any pattern of the past. The whole culture of America will be indigenous and unique; and the various arts that comprise ''culture'' must develop their own meanings, techniques, and forms out of the conditions of the American environment.

Of the arts, literature is the most socially sensitive and effective. It reflects more of the whole cultural complex, perhaps, than any other art; at least, in periods of germination, so to speak, when the techniques of printing are known, literature is less likely than the other arts to be submerged by the demands of conquering the purely physical environment. In any modern culture literature is of great importance. We turn now, therefore, to a very brief survey of American literature for whatever light it may throw upon American cultural development.

TENDENCIES IN AMERICAN LITERATURE

The Civil War marked the end of perhaps the finest literary epoch in American history, that of New England in its heyday, the period of the transcendentalists. Transcendentalism was a fervid practical idealism. Henry Thoreau, not the civilized man of the European drawing room, but the humanized individual of the American woods, took Plato with him when he went to hoe in his bean field. Emerson was the fervent apostle of daring to trust life—new life and new experiences. The transcendentalists brought the divine down out of the clouds and set it upon the face of common things. They reformed and agitated and took the news and views from Europe, and respected learning, and set up a little republic of letters on American soil. It was New England's "flowering," America's "golden day."[7] It was a revolt from literalism, with all the passionate and vague idealism that such revolts can have; and it was still close enough to what it revolted from, Calvinism, to have moral earnestness and high seriousness. It was humanitarian, humanistic, democratic, and romantic. It lacked only a certain lustiness necessary to bring it into accord with the realities of American life. Too highly academic, it did not achieve an American synthesis, although as a belated American romantic and idealistic movement it had its own peculiarly taut Yankee magnificence.

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[7] See Van Wyck Brooks, *The Flowering of New England* (New York: E. P. Dutton and Co., 1936), and Lewis Mumford, *The Golden Day* (New York: Boni and Liveright, 1926).

Emerson was the most representative man of the era, if not the greatest as writer. He could think lyrically of the bustling out on the frontier, where men turned with naive faith to uncharted experience and believed that these new experiences, horrible in many respects to the mind of a Boston Brahmin, would justify themselves in terms of men's best ideals. Emerson's learning, his contact with the best of the past, his humanistic leanings made him sometimes skeptical of the frontiersman's worship of quick profit and mere quantity. Emerson did not shudder so much at the frontier's uncouthness as at the promise it gave of flowering into nothing more noble than a paradise for exploiters. Indeed, uncouthness of mind and manners, although it made the Brahmin uncomfortable, rather pleased the Rousseauistic revolutionist in Emerson; the Western woodsman was free, a child of nature making his own laws as he went. But Emerson lived to see his fears materialize. The frontier began to worship profits instead of freedom, and to admire a kind of village cautiousness and social conformity instead of going on in the "noble savage" pattern Emerson had set for it.

Good and bad carried over from transcendentalism into subsequent American life. The transcendental faith in life informs Whitman's poetry, where it is combined with a hearty, almost primitive interest in the variety and sheen of this multiform, complex, highly individuated world. Emerson was Whitman's teacher and was among the first to commend the "barbaric yawp" of the newer poet. This from Whitman is but a lustier version of ideas implicit in "Nature," "The American Scholar," or the "Divinity School Address" of Emerson:

> All beauty comes from beautiful blood and a beautiful brain. If the greatnesses are in conjunction in a man or woman it is enough . . . the fact will prevail through the universe . . . but the gaggery and gilt of a million years will not prevail.[8]

Or again:

> Little or big, learned or unlearned, black or white, legal or illegal, sick or well, from the first inspiration down the windpipe to the last expiration out of it, all that a male or female does that is vigorous and benevolent and clean is so much sure profit to him or her in the unshakable order of the universe and through the whole scope of it forever.[9]

The unmistakable Emersonian note is that what we, new men in a new land, do with ourselves according to our instincts and our insights will be universally sanctioned, as well as what Plato and Jesus and Dante did in theirs.

Only sixteen years later, Whitman's faith was intact, but in the foreground were alarming ill promises.

> . . . I would alarm and caution even the political and business reader, and to the utmost extent, against the prevailing delusion that the establishment of free political institutions, and plentiful intellectual smartness, with general good order, physical plenty, industry, etc. (desirable and precious advantages as they all are), do, of themselves, determine and yield to our experiment of democracy the fruitage of success. With such advantages at present fully, or almost fully, possessed—the Union just issued, victorious, from the only foes it need ever fear (namely, those within itself, the interior ones), and with unprecedented materialistic advancement—society in these States, is cankered, crude, superstitious, and rotten. Political, or law-made society is, and private, or voluntary society, is also. In any vigor, the element of the moral conscience, the most important, the verteber [*sic*] to State or man, seems to me either entirely lacking, or seriously enfeebled or ungrown.[10]

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[8] Whitman, Preface to *Leaves of Grass* (1855).

[9] *Ibid.*

[10] Whitman, *Democratic Vistas* (1871).

The "Gilded Age" had begun. Intellectual and spiritual self-reliance had degenerated into the rugged individualism of the spoils hunters of the Grant era and later. Not until the turn of the century was the greedy scramble to be more than sporadically challenged; and not yet has any destiny for America been conceived that smacks of the fresh idealism of Emerson or Whitman. ". . . the almost complete silence of the contemporary authors in the face of the business rapacity and political corruption of the Gilded Age saddens the heart." Mark Twain's Colonel Mulberry Sellers, conceived in contempt, struck his readers as merely funny and "smart." And yet there was protest, both conscious and unconscious. American literature turned from academic idealism and exotic romance to an exploration of the American scene. A long documenting began; its overtones, however, were often not those of critical challenge. Western humorists flourished, a varied literature of the folk was explored, "local color" realism began. This literature was often sentimentally complacent, not critical, but it turned attention to the realities of the American scene, although it may have reported those realities shallowly. Three of the greatest of American novelists flourished: Mark Twain (Samuel Clemens), William Dean Howells, and Henry James. Clemens put down in the most precious documents of American literature the fresh vigor and the idyllic charm of frontier America, before it was too late. Howells wrestled manfully with the problems of the industrial scene, the ways in which individual dignity and peace were corrupted and thwarted by the amoral or immoral major impulses of a "progressive" society. James, shrinking from the dehumanized society of America, sought in his novels the perfect form for the portrayal of beings who deeply wished to be civilized. Naturalism in fiction, too, began to challenge the complacency of Americans. Hamlin Garland, in novel and autobiography, reiterated his theme that American farm life was bleak drudgery lived out in perpetual fear of the mortgage holder, who was the agent of a predatory money system that made ''free land'' and ''free opportunity'' a sinister joke. Stephen Crane dared to write realistically of a slum girl and of the cowardice of a youth in the Civil War. Frank Norris, avowed disciple of the French naturalistic novelist, Zola, wrote his epic of the wheat, showing the greed and the turmoil of the struggle for profits and for existence, holding all the injustices and cruelties beyond the reach of man's will or man's morals to control. Jack London, socialist and inverted humanitarian, portrayed strong and ruthless men in his novels, men driven by a Nietzschean will to power and a deep contempt for the moral codes of ordinary mortals—these codes representing a vast hypocrisy anyway, in London's eyes. Some critics have seen in London's love of cruel characters but another side of the ruthlessness of American imperialism from 1898 on. Americans read London by the millions of copies, while they deplored his immorality.

This bitter, somewhat scientific-minded trio (Crane, Norris, and London) had had the way prepared for them by realistic protests of the preceding years. E. W. Howe's *Story of a Country Town* (1883), Harold Frederic's *The Damnation of Theron Ware* (1896), Joseph Kirkland's *Zury: The Meanest Man in Spring County* (1887), Margaret Deland's *John Ward, Preacher* (1888), Hamlin Garland's *Main-Travelled Roads* (1891) had all pretty well deflated the idea that American rural or small-town life was an idyllic paradise. Two writers outside the realm of *belles lettres* had done something to shake complacency in the manifest destiny of the industrial system and its teammate, political corruption. Edward Bellamy's *Looking Backward* (1887) and Henry George's *Progress and Poverty* (1879) had, respectively, shown the possibilities of socialization of industry and the horrors of unearned increment in land. Bellamy's book sold over a million copies in a few years.

The years from 1860, then, to the turn of the century or a little after, saw American literature turn first to explore its frontier resources, putting Eastern gentility behind it, and then to engage in social protest against sentimentality, complacency, and provinciality. Below this realistic awakening and this social protest, of course, ran the larger current of more popular literature: synthetic historical romances, glorification of the crusty American character in its more eccentric and esoteric phases (faithful Negro servants and beautiful belles in the South, self-sacrificing prostitutes and warm-hearted prospectors in Bret Harte's West, defeated but poetic spinster souls in New England), and ordinary sentimental romance. Notable in his reaction to critical contempt for the American way was the sentimental humanitarian H. C. Bunner, who seldom missed an opportunity to smear radicals, realistic writers, agitators, and labor leaders as the benighted destroyers of God, Business as Usual, the Home, and Love. Realism, up to 1900, was more a protest than an accepted mode, although the names that are remembered *now* are largely those of men who unflinchingly set themselves to tell the truth about life as they saw it instead of pandering to the moralistic, saccharine, and ''local color'' tastes of the great reading public.

From 1900 to 1914 was a fertile period, continuing and intensifying the major trends of 1860-1900. The noisiest, if not the most valuable, poetic renaissance in American history began towards the end of the 1900-1914 period. Amy Lowell's Imagist school put an end to the taste for Tennysonian glibness in poetry. *Poetry* magazine, established in Chicago in 1912, began to give a voice to the Prairie school of poets, who, inelegant at times, were strong and realistic. Willa Cather probed the provincial repressions of small-town life and discovered poetic and ardent souls in rebellion against that Puritanical bleakness. The muckrakers of 1903-1907 proved the existence of sordid ties between business and the political machines of the cities.

Upon the termination of World War I, America and American literature turned to a frenzy of debunking, self-criticism, and self-analysis. Guided by such critics as Van

Wyck Brooks, Waldo Frank, and Randolph Bourne, Americans were made to see that the standardized culture of America was predicated upon a tie between Puritanism and industrialism: Puritanical hatred of art and joy; Puritanical love of repression (Prohibition, censorship, red-hunting)—all this combined with a withering worship of the ''bitch-goddess Success.'' Mr. H. L. Mencken made uproarious fun of fundamentalists, Prohibitionists, small-town boosters, censors, all ''wowsers'' who sought to interfere with the pleasures (epicurean or violent) of anybody else. Sinclair Lewis and Zona Gale portrayed the bleakness of the small town. Lewis went further and showed the social fears, the repression of individuality, the gadget-ridden hollowness of spirit in the American city-dweller, Babbitt. The years 1920-1930 are brilliantly and vividly set down in Frederick L. Allen's *Only Yesterday*—the era of Prohibition and the drinking of enormous quantities of bathtub gin; the era of the slackening of taboos and mores; the era of quick profits and jazz; the era of America's too sudden emergence from a small-town and rural culture to the culture of Megalopolis. The gain of those years was the breaking of practically every known literalism; the loss was that no unified sense of civilized values developed.

The years of the great depression of 1929-40 represent a search for values. Literature has abandoned its familiar theme of youth in revolt against Puritanism. If the literature of these last ten years can be generalized, it may be said to be a literature of social consciousness, humanitarian but not sentimental, and on its polemical side, a literature which is trying to incorporate into the democratic ideology whatever of planning and conscious direction may be necessary to make democracy work. Literature as such is almost swamped under the succession of treatises on politics and social and economic problems. Shortly after the stock market crash of 1929 there appeared a series of novels glorifying life upon a subsistence level on farms, where saner mortals began to care more about the eternal verities than about the ups and downs of the stock market. This nostalgic phase soon gave way to more serious probing of actual problems. The highlight of fiction between 1930 and 1940 now appears to have been John Steinbeck's *The Grapes of Wrath,* an epic of human survival against terrific odds, passionate in its feeling for justice, and making use of every resource of plainspokenness that was gained for art in America in the preceding decade. Very significant is the fact that the Joad family, heroes of the book, are painted as *heroes.* The tendency of 1920-1930 to belittle every human action and motive has begun to disappear. The possible nobility of human character (although not on any grandiose level) is to be seen also in Ernest Hemingway's recent novel, *For Whom the Bell Tolls.* Both Steinbeck and Hemingway say that a man can stand up. A new theme for fiction seems to be emerging: a human being tragically suffering in the cause of humanity against brutal insensitiveness is ennobled and dignified. This newer view probably owes very little to the brief revival of humanism in the early thirties, for that movement was largely academic and theoretical. The reviving sense of the importance and dignity of the human being probably arises out of the age-old humanitarianism of the American tradition, out of the practical experiences of modern man in trying to meet the totalitarian challenge to Christian ethics, and out of recent scientific humanism.

The novelist of today is infinitely better-read than his predecessor of a decade ago. Mature, technical criticism has found a place in the journals of the last ten years—not so much in the reviewing organs as in comparatively obscure publications of limited circulation such as *The Partisan Review, The Southern Review,* and *The Kenyon Review.* The hectic campaign against Philistinism in general—a matter that too much occupied the writer of 1920-1930—is no longer necessary. The writers now discuss the aesthetic theories of Marx, Lenin, and Henry James in mature, if not very decisive, terms. Poetry is even freer. The right of the poet to be obscure and difficult if he needs to be so in order to achieve the just expression of his complex modern consciousness, is no longer debated. A mature and technical poetic criticism exists, without any effort wasted in baiting the bourgeoisie. Censorship is no longer a problem for the serious writer. Scholar and creative artist have drawn closer together, narrowing the gap between highbrow and lowbrow; this gap, Mr. Van Wyck Brooks lamented a few years ago, was the greatest plague of American culture: the professor among his meaningless documents—the popular writer flattering every inadequacy of his audience. Largely because of the influence, in one way or another, of Mr. T. S. Eliot, the modern poet is aware of the *continuity of tradition,* and knows that Dante, Shakespeare, Donne, Dryden, and Hopkins have much to teach him, and without making him an academic imitator. Snobbish veneration of the past has given way to the desire to rediscover the usable past—and this is perhaps the greatest gain of recent American writing, for it kills two fetishes at once: that a sprightly contemporaneity is all, and that the contemporary is worthless to a man of sound taste.

A very important note in the literature of the present day is that of a growing dissatisfaction with the relativism of view attributed, rightly or wrongly, to what is called "scientific rationalism" or "liberal rationalism." It would take a metaphysician to handle the subject adequately, but a very simple statement of the matter will suffice for present purposes. Science has presented a picture of a nonmoral universe. Man's customs, laws, and beliefs, instead of being right for all time, based on principles universally valid, are the accidental products of a specific time and place. Nothing is universally valid or right. Man is seen altogether as a creature whose mind and will are just as subject to the operation of immutable natural law as is the falling of a rock. Now, this view, accepted more or less eagerly and hopefully in the nineteenth century, promised at first that since nothing was permanently true, man was free to work out control of his environment to the best of his ability. Certain implications of this naturalistic view of man and the universe are at the bottom of the concept of progress, inherent in the utilitarian movement of the nineteenth century, and responsible for the tremendous secularization and ultimately the vulgarization of life. Now, modern man behaves, probably, no more badly on the whole than his ancestors of three hundred years ago. Indeed, in many respects, he is kinder, certainly cleaner, less violent, less brutal, and, paradoxical as it may seem at the moment, more tolerant. But modern man's superior gentility is not the point at issue; nor is the question of whether or not man has progressed. The point is that modern man has begun to doubt his dignity and importance. He misbehaves no more than his predecessors, but he is unquestionably more and more morally unconcerned about his misbehavior, and therefore has less and less moral energy to call upon for the stopping of misbehavior. Indeed, the very words misbehavior, crime, sin, under the naturalistic view become colorless words describing certain behaviors without implying any moral condemnation of them.

The turning against the naturalistic view can be seen early in the twenties in the poetry of T. S. Eliot. In *The Waste Land* (1922), a long and difficult poem, Mr. Eliot loves to pose images of modern disenchantment against images of remembered loveliness from Shakespeare, Dante, and mythology. The whole impression is one of the disenchanted unloveliness and vulgarity of men to whom beauty and grandeur, on the one hand, and sin and meanness, on the other, are all equally meaningless. It was not long afterwards that Mr. Eliot calmly announced himself to the world as a royalist in politics, Anglo-Catholic in religion, and classicist in literature. He had had enough of the picture of himself and other men as accidental collocations of atoms in a meaningless universe; worse, the further and further departure from traditions, Mr. Eliot felt, left modern man with no center.

Throughout the early poetry of Mr. Archibald MacLeish can be traced the romanticized self-torture of a man to whom the universe gives back no answers with moral meaning. Even Hamlet had the transcendental injunction to get revenge and vindicate his father's honor; the modern Hamlet of Mr. MacLeish lives in an agony of trying to find some reason for action in a world where no action (particularly noble action) has any point. The naive answers of the nineteenth century no longer serve the modern poet. To live for the improvement of the race is no longer worth while when the race itself may be of no cosmic importance; to live to do good to one's fellow-men is a very dusty answer when one's fellow-men also don't know what they are living for. Utilitarianism and the worship of progress turns out to be no more than hedonism with an infusion of high seriousness. And so, many modern minds are in search of a transcendent sanction for man's conduct. A modified form of realism (the *realism* of the medieval philosophers, which assigns *reality* to abstractions, including man's ideals) is being embraced; and this is being combined with a serious search of the past for concepts which will strengthen the notion that one's humanity is not a cosmic accident, but a universal reality, triumphant spiritually even when physically in defeat. Some such modification of the age-old position of the idealist in philosophy can be found in the writings of Jacques Maritain in France, T. S. Eliot in England, and many of the critics and creative writers associated with the so-called Fugitive Poets of the South. The new concept has not yet made for any triumphant idealism in literature; for the faith of these men is a difficult one, and a severely intellectual one, tolerating no easy and quick victories of "mind" over the ever-present, harsh realities of this world.

More important, perhaps, is the fact that many men who remain nominalists and relativists are deeply disturbed by the permeation of moral relativism into the minds of the public. As democracy faces a serious challenge from totalitarian forms of government, men like Lewis Mumford, Waldo Frank, and MacLeish are discouraged by the implications of the ordinary man's saying: ''After all, this is a fight between one imperialism and another''; ''Why should we fight for democracy or to save Christian civilization? These are but words.'' For this indicates, these critics say, a woeful loss of the power to make moral distinctions. Liberal rationalism, they say, has gone too far—so far that it is incapable of drawing upon the power of ''the Word'' to fight to save itself.

Somewhat analogous is the recent attack of Hogben in England and Robert S. Lynd in America upon the concept of ''scientific objectivity.'' The liberal's ideal of weighing matters rationally, waiting to get all the evidence in, and suspending judgment, is (these men say) likely to degenerate into an excuse for *doing nothing.* ''Scientific objectivity'' itself becomes an absolute and a fetish, moving on towards that *complete tolerance* which, S. T. Coleridge knew, is complete death. ''That which withstands nothing hath itself no standing place.'' The whole three hundred years' effort towards liberalism and tolerance is in danger of going down before a fanatical intolerance which at least does not make a fetish of scientific objectivity, but *acts* upon faith and unreason. If Reason wishes to prevail it must be a bit unreasonably enamored of Reason—which is the great paradox of modern times.

The writer of this essay does not profess to be a prophet. All these trends, however, would seem to indicate that we may expect in the literature of the near future some rehabilitation of the idea of the powers of the will, some climbing out of the naturalistic slough, a slow retreat from determinism, a refurbishing of the hero and of the tragic view of life, and in poetry a subtler metaphysics along with a keener perception of form.

The ''return to metaphysics'' (a convenient phrase to cover the trends here suggested) is, of course, brilliantly opposed by pragmatism, instrumentalism, and scientific humanism. For the ideas of an Eliot, a Maritain, or even a Robert M. Hutchins often prove upon examination to be little more than poorly concealed apologetics for religious authoritarianism or medieval scholasticism. Whether or not the new "trends" prevail, the challenge beginning to be offered to half-baked romantic humanitarianism, optimism, and progress has been long overdue.

Little has been said here of the vast field of popular literature or of the tremendous increase in the popularization of knowledge. Nearly two hundred years ago, the usually sober Dr. Samuel Johnson wrote his encomium to the printing press, in which he saw visions of the enlightened and humane society that the era of cheap printing was to usher in. He would, no doubt, retract his sanguine words if he could see in this age of high general literacy how low taste is, even among members of the moderately well-to-do classes. It is sometimes difficult to see how any good can come from the jingoistic tirades of the editors of such a magazine as *Liberty;* from the often cut-to-pattern, uncritical, and unrealistic fiction appearing in the magazines of large circulation; from the trend towards mere appeasement of idle curiosity which is to be noted in the increase of picture magazines; from the lurid, gossip-mongering magazines which pry into the private lives of moving picture celebrities; or even from the "outline" books which pretend to give, for example, the history of philosophy in a thousand pages of interesting anecdotes from the lives of the philosophers. The foregoing represents, of course, the highbrow view; but to abandon this view would be to abandon all critical standards whatever. Yet one cannot deny that in all ages gossip, sensation, and the lurid have constituted the major literary fare of large sections of the public. In an age of high general literacy such as ours, an abundance of ephemeral printed matter is to be expected; its presence is indicative of neither decadence nor progress. And it is not as bad as it might be. On the whole, popular fiction today, in book or magazine form, is probably freer of lubricity and maudlin sentimentality than ever before. As for the picture magazines, the better ones are achieving a marvelous documenting of the events of our time; the absence of critical evaluation of events is due, not to the nature of popular literature *per se,* but to the sense of uncertainty that pervades our whole culture at the moment. Furthermore, the modern mind can apparently survey an immense amount of detail, and take an eager interest in it, without feeling any need for generalization, synthesis, or evaluation—a quality of mind that is unsatisfactory, perhaps, in the long run, but which is indicative of a culture in the making.

The much-frowned-upon popularizations in ''outline'' form serve a definite and entirely worthwhile purpose in a democratic culture. The fad of outline books—in history, philosophy, the arts, literature, and geography—undoubtedly came in answer to a demand for knowledge in a form digestible by the public. Such books, in a sense, represent a reaction against intense specialization and stand for a healthy, democratic, pragmatic notion: that if knowledge really is valuable, then it can be made presentable to readers who have a normal amount of curiosity. Our age is rich in resources for bringing to the public at large fairly authoritative, not-too-inaccurate summaries of the status of present-day knowledge. The duty of an educator in an avowedly democratic and dynamic and changing society is to use these resources as a starting point whenever they may serve to stimulate interest or curiosity.

OTHER ARTS TODAY AND TOMORROW

For this part of the discussion we should keep well in mind Whitman's words: ''. . . for the gaggery and gilt of a million years will not prevail.'' There is a great temptation to assume that, because millions of dollars' worth of the world's greatest paintings repose in American museums and nearly all the world's greatest musical performers are ''under contract'' in America, we are leading the world in ''culture.'' These things are an immense aid, of course, and they are tangible and measurable. But American arts must grow out of the

American condition; and our almost incorrigible colonialism will prevail until we understand this point thoroughly. Nevertheless, the signs are exceedingly hopeful.

The major arts which contribute to culture and which comprise ''culture'' (in the narrower sense) are literature, music, sculpture, painting, architecture, the theater; and today, photography, radio, and moving pictures. Any essayist who would undertake to discuss all of these adequately would be guilty of presumptuousness. There can be, in so brief a work, no historical survey of their development and no authoritative statement about any of them—only a kind of digest of what has been said about the promise of each, and an impressionistic and undocumented digest, at that.

RADIO, MOVIES, AND PHOTOGRAPHY

Radio and the movies still exist mainly as mediums of entertainment and not as arts. Radio, of course, will always remain more a transmitter of other arts—music, drama, oratory—than an art itself; and the movies will, and should, remain very largely a medium for the entertainment of masses of people. And yet, in each of these fields, certain technical problems arise which demand an artistic approach to their solution. Sound effects on radio and the sound of the human voice have been blended for the creation of what may be a great new art. The radio plays of Archibald MacLeish are not merely plays transmitted by radio; they make use of the announcer and traditional studio sound effects to create a new medium—vivid, moving ''sound pageantry,'' it might be called. An incidental gain, according to MacLeish, is that the art of poetry is brought back to fundamentals: the *ear* of the listener takes in speech sounds and rhythms, the printed page fades, and poetry returns to its condition in the days of Homer and the ballads—*heard,* not seen.

It is a commonplace of present-day movie criticism that many of the finest productions are not cinematic readaptations of novels or legitimate stage plays, but are those productions which start and end with movie possibilities in mind—emphasizing not story, or characterization in the traditional sense, or dialogue, but arranged as a series of pictorial impressions, movement, gesture, startling and evocative juxtaposition of scenes or views. In many respects the old silent movie was superior to the ''talkie'' in so far as adherence to the art of the movie is concerned; for since the coming in of the sound track, the movie has too often become, like radio, a mere transmitter of materials which are better expressed in other mediums: stage plays, musical revues, vaudeville skits, mere photography. The educational value of the movie as transmitter of good materials (*Rebecca,* an adaptation of a romantic novel; *No Time for Comedy,* an adaptation of a brilliant, sophisticated stage comedy; *The Grapes of Wrath,* adaptation of a novel of social protest, with some of the power of a ''documentary'' so deeply did it bite into the realities of the American scene), is not to be denied. But if it is a question of the movie as art, we must keep in mind Orton's sane declaration of principle:

> . . . an essential condition of all art . . . is *the discovery of something to say, and a way of saying it, uniquely fitted to the particular means of expression.*[11]

The movie *can* do things that cannot be done in any other medium. ''True cinema consists of three elements—image, movement, sequence. . . .'' In ''image,'' the cameraman seeks for telling and important subject matter, with the attempt to see ''the significance of things'' and to impose mood, temper, or a certain key upon things seen, with ''personal impersonality,'' ''the effort to convey through the image a certain way of apprehending things, a certain sense of life.'' The camera excels the eye in its ability to change from minutiae to broad and sweeping views without creating any sense of incoherence; the camera, properly managed, reveals *significant form.*

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[11] William A. Orton, *America in Search of Culture* (Boston: Little, Brown, and Co., 1933), pp. 227-28.

"Movement" must lead to unity of effect, and unity comes not out of a mere succession of events, but out of synthesis, the artist's mind distorting some things, speeding or slowing other things, exercising the principle of selection, looking towards an imaginatively conceived effect. And "sequence" is succession of images and events, or better still, what happens in the mind of the spectator between images and events, just as in music the important thing is what happens *in between* chords, the subjective effect created by objective means. Orton quotes the famous Russian movie director, Eisenstein:

> Is not this exactly what we of the cinema do in time, as he [the eighteenth-century Japanese engraver Sharaku] in simultaneity, when we cause a monstrous disproportion of the elements of a normally flowing event, dismembering it. . . . By the combination of these monstrous incongruities we gather up the disintegrated event once more into one whole, but in our aspect.[12]

It all boils down to a term much heard in movie criticism, "montage," which means the artful arrangement of image, movement, and sequence, looking towards totality of effect. It can be seen in the French picture *La Maternelle,* in most of Eisenstein's pictures, in practically all the work of Charlie Chaplin. Perhaps the best movie, as movie, ever made in Hollywood is *It Happened One Night.* Subject matter is significant, and the "montage" skilfully brings out the desired emotional effect—a mixture of the reckless gayety and the pathos of a people perpetually on the move.

Not enough has yet been made of the so-called "documentary" films—such works as *The River* or *The Plow that Broke the Plains* or *The Wave* (with Mexican subject). Visual instruction through the medium of the educational film is a field the possibilities of which are only beginning to be realized. While Hollywood keeps its cameras turned mainly on the tinseled aspects of American life, the thrilling realities are neglected—such things as the movement of traffic in cities; the pouring in and streaming out of millions of factory workers every day; the ceaseless weaving back and forth of the homeless, the uprooted, the property-less; the plowing and the harvesting of crops; every day's movement of freight; the surge of trucks and trains across the continent. All these things and hundreds more are *epics.* At least, the proper camera handling of these things could be made epic. That is what art is for: to reveal the significance and sweep of those things we think we already know, and don't. But the poetry-starved populace gets a glimpse of these significant realities only once in a while in some clumsy movie like *The Covered Wagon,* where worthwhile documentary elements are smothered under hackneyed story and sugary sentiment.

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[12] *Ibid.,* p. 236.

The shortcomings of Hollywood are usually attributed to the producers' penchant for lavish expenditure. The system of exploiting stars in a series of vehicles with like plot (think of the likeness of plot in all the movies in which Nelson Eddy and Jeanette Macdonald have appeared together; think of the inane repetition of plots in pictures designed to get in a scene or two from an opera or a selection or two by a symphony orchestra!); the system of block-booking, whereby an exhibitor to get a feature must take also a pedestrian item, or worse, take two "features"; the system of producer control over a majority of theater outlets—all these are bad, and they are symptomatic of an industry that has been run on a purely exploitative, big-business, quick-profit basis. Actually, it represents a very inefficient measuring of demand. There *is* a demand for simple pictures honestly made, which would be infinitely less expensive to produce than are most of the lavish productions of today. There is a demand for "documentaries." There is a demand for houses devoted solely to good newsreels. But Hollywood in the main continues producing the super-colossal, which can be made profitable only if its appeal is geared down to mass level. Study of the potential market, with wares geared to the level of intelligence of the customers in each section of the market, might yield steadier profits and would certainly give some serious actors and directors more opportunity to make good pictures. Perhaps sheer economic necessity will drive Hollywood off its mass-production basis. But until serious movie artists are given the reins, one must admit, and be grateful for, the tremendous improvement in tone and subject matter in the movies within the last ten years. If no national crisis drives the movie industry into the hands of those who have propagandistic axes to grind, a continued improvement may be expected.

The continued high excellence of photography in America is a cause for rejoicing. As compared with the movie, the photograph has only "image" to think of; and the amateur, unhampered by the necessity of any great capital outlay, is free to experiment and to do the very best he can. The consequence is that every year's *Photo Annual* includes examples of the art that might well make non-representational painters envious. Emphasis is not on sentimental subject or picturesque detail, but upon significant form. This interest is a powerful ally of growth of artistic consciousness and integrity generally. Extremely significant is the social and documentary, as well as artistic, value of the photographs of Margaret Bourke-White and a host of other photographers who have worked both independently and in collaboration with various planning and rehabilitation agencies of the government.

THE THEATER

Contrary to the fears of a few years back, the theater has not yet suffered irretrievably from the rush of actors, managers, stage designers, and directors to Hollywood. The metropolitan theater in some recent seasons has been as vigorous as at any time in its history. A decided loss, however, is the almost complete disappearance of road companies and the conversion into ''movie palaces'' of practically all the legitimate houses in the country except in a mere handful of the largest cities. This loss is somewhat compensated by comparatively thriving but still inadequate ''Little Theater'' companies and student dramatic societies in hundreds of communities. Also, it must be remembered, in modern times at least, the stage has confined itself mainly to metropolitan and cultural centers, and the decline of the provincial theater (assuming that it once was of some consequence) is perhaps not a serious threat to the future of the theater generally. Indeed, as radio and movies more and more provide for the entertainment of the populace at large, the legitimate theater may find itself free to pursue more serious aims. On the other hand, radio and movies may offer such shining lures to all potential workers in the legitimate theater that the latter may die off. The most that can be said now is that the fears of the last decade on this score have not yet materialized. Whether or not the next generation of producers, actors, and designers will remain loyal to the stage proper is an open question, since the newer generation will not, like the older, have had its first love for the legitimate stage alone. The excellence of projects by the WPA Federal Theater in recent years is perhaps a sign that if the need ever arises the American people can find their own way in dramatic expression, independently of commercial producers.

As literature, writing for the modern stage is on a high level. As Joseph Wood Krutch says, a successful play today is likely to be as good in its kind as is the successful novel, a condition that has not always been true in America. Theatrical writing in the nineteenth century never approached the excellence of the prose fiction of Melville, Hawthorne, or Mark Twain. True, James Herne and Clyde Fitch, following the mode of Ibsen, began to treat social problems seriously. After the World War, *What Price Glory?* was as fearless in its naturalism as anything by the Russian Gorki or the German Hauptmann. Beginning around 1920, the theater kept up with the novel in intellectual attitudes and in serious challenge of American Puritanism and provinciality, and it won for itself the same right to experimentation and to frank-spokenness. Eugene O'Neill won world-wide reputation, making use of technical devices begun in Europe, such as expressionism and symbolism, and drawing eventually in his *Mourning Becomes Electra* as close to a great tragedy in the traditional sense as any modern playwright in any land. Maxwell Anderson's attempts to bring a dignified blank verse back into plays have been notable, if not always entirely successful. S. N. Behrman is perhaps as excellent a writer of sophisticated, critical comedy as any man living today. For keen characterization and intelligent use of Freudian material in the theater, Sidney Howard's *The Silver Cord* is unexcelled. Robert Sherwood has a keen sense of the American past and a liberal, intellectual point of view which he puts to use with great technical facility in behalf of democracy and its struggle for existence. He is never merely didactic, and he has a fine sense of character, comedy, and pathos. His *Abe Lincoln in Illinois, Idiot's Delight,* and *There Shall Be No Night* are not only good theater but are a part of the significant literature of their time. George Kaufman, Marc Connelly, Elmer Rice, Philip Barry, Thornton Wilder, and a host of other playwrights not so well known contribute significant meaning to theatrical writing. Paul Green's plays and Marc Connelly's *The Green Pastures* (a dramatization of material by Roark Bradford), all emphasizing folk qualities, are indicative of the vitality of indigenous material in the theater. Clifford Odets, first a good playwright and secondarily a Marxist in his political thinking, has been the leader in quite recent drama of social significance. Whatever one may think of the over-publicized, exuberant, energetic Mr. Orson Welles, there is no denying that such a figure appears only in periods of essential vitality in the theater. His sensationalism (as in his radio adaptation of *The Men from Mars*) and his experimentation (as in his presentation of Shakespeare's Julius Caesar as a modern dictator) are signs of health, not decadence. Altogether, such a roll call as has been made in this paragraph indicates the vitality and fearlessness of the stage, and the high literary quality of the writing for the theater.

To take only the high points, O'Neill's discovery of profound tragic emotion in contemporary situations, Behrman's skill in comedy of manners or "high comedy" in the traditional sense, and Maxwell Anderson's attempt to forge a poetic language capable of ennobling his characters and situations—these are a "most encouraging sign that an American drama more than merely respectable and temporarily significant may be on the point of developing."[13]

Of some social or cultural significance, perhaps, is the fact that so large a percentage of outstanding modern playwrights are men of academic background as well as of practical theatrical experience. S. N. Behrman left acting in a stock company to attend college. His ideological background was strengthened in Professor Irving Babbitt's classes at Harvard, and he worked in George Pierce Baker's "47 Workshop." O'Neill's father was a famous trouper, and after his *Wanderjahre,* O'Neill, too, came under the influence of Baker at Harvard. Sidney Howard, of well-to-do family, grew up in an atmosphere of books and attended the University of California and the "47 Workshop" at Harvard. Philip Barry studied for two years with Baker at Harvard. Maxwell Anderson worked with Professor Frederick H. Koch, and later had other academic as well as journalistic experience. The point is perhaps not worth laboring, but there does seem to be some ground for holding that, with our playwrights as with literary men in general, the gap between "highbrow" and "lowbrow" is closing; ideas, tradition, and serious probing of the contemporary begin to work together. True, much of the advanced thinking of our playwrights already appears immature and even puerile. The whole "anti-Puritan revolt," in which dramatists indulged themselves as much as the novelists, gave rise to O'Neill's puerilities, Barry's false heroics, Howard's cocksureness; but Puritanism, or what has been falsely labeled such—let us call it Philistinism, a moral rigidity and unimaginativeness, a hatred of art and ideas, a false gentility and squeamishness—had to go. The furious battle against provinciality has given playwrights a line to fight on. The future of the theater is about as secure as the future of anything else in America.

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[13] Joseph Wood Krutch, "The Theater," in *America Now, an Inquiry into Civilization in the United States,* edited by Harold E. Stearns (New York and London: Charles Scribner's Sons, 1938), p. 74.

PAINTING AND SCULPTURE

The excuse most often used for America's lack of renown in the art of painting is that America had a continent to settle and was the colony of a nation that was not itself highly eminent in art. Until quite recently, American painting was thought to have been afflicted by colonialism and the consequent ills of timidity, self-depreciation, and feeble imitation. In very recent times, with Europe's political and economic collapse, American artists and critics have repatriated themselves, and in revaluing the American product in art have agreed on certain high points of American achievement. Even so, the balanced view remains somewhat as follows: Despite the eminence of the early portrait painters, Copley and Stuart, the reputation of Benjamin West (the American who became the president of the Royal Academy), the native flavor and fine technical qualities of the American triumvirate, Ryder, Eakins, and Homer, the great reputation of some of the expatriates like Whistler—American painting was a comparatively feeble element in national expression until well after the beginning of the twentieth century. It is entirely possible, however, that as the spirit of pride in our native art develops further, more and more high points in the American past may be discovered and appreciated.

James Jackson Jarves, whom a modern critic calls the "most astute of American art critics,"[14] wrote in 1869: ". . . whatever feeling for beauty the coming American may possess, that of the present one is the most obtuse or wanting of any people except the English."[15] Jarves felt a constant reproach to the United States by learned Europeans "of [our] being a great nation destitute of any art." Even Jarves, however, was a good patriot, holding that the promise of this half-fledged people, even in matters of art, was tremendous. The fifty years following Jarves' laments were the years of the great expatriation of American artists.[16] In 1905, Samuel Isham opened his *The History of American Painting* with these words:

> The fundamental and mastering fact about American painting is that it is in no way native to America, but is European painting imported, or rather, transplanted, to America,

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[14] Sheldon Cheney, "Art in the United States, 1938," in *America Now,* p. 84.

[15] Quoted by Cheney, *loc. cit.,* p. 84.

[16] Indeed, the Gilded Age was a barren one in every cultural respect, if we may judge merely by the titles of some books of the nineteen-twenties, for example, *The Pilgrimage of Henry James* and *The Ordeal of Mark Twain,* both by Van Wyck Brooks. The thesis is that these men, confronted by the greed, opportunism, and moral and artistic insensitiveness of American life, could not function as artists; James escaped to the richer cultural background of Europe, and Mark Twain abandoned artistic integrity and pandered to the American love of extravagant humor. For interesting denial of Brooks' general thesis, see Bernard DeVoto, *Mark Twain's America.* Also interesting is the reversal of position by Lewis Mumford. *Sticks and Stones* (1924) complains of the cultural bleakness of the Gilded Age, especially in architecture. *The Brown Decades* (1931) unearths Richardson and Sullivan in architecture, Roebling in industrial design, Olmsted and others in conservation and public park planning, and numerous painters. Brooks, Mumford in his earlier work, Waldo Frank in such a book as *Our America,* all represent a phase of American criticism in the nineteen-twenties, when nothing good could be said of America. This phase has passed into one of critical rediscovery of the signs of cultural promise in America's past.

> and there cultivated and developed; and even that not independently, but with constant reference to the older countries, first one nation or school having a preponderating influence, then another.[17]

As late as 1922, in a symposium entitled *Civilization in the United States,* the writer on art complained that the American output was still provincial.

The tendency since the twenties, the artists themselves having abandoned much of their self-deprecatory bewilderment, has been to find a few geniuses of American painting before 1900, and quite a host of honest and vigorous men. The critics of different schools, of course, do not always agree; but among the geniuses, by rather general consent, are Albert P. Ryder, John H. Twachtman, and the expatriate Whistler; among the eminent are Inness, Homer, Eakins, Duveneck, Cassatt, Fuller, and Hassam, and in sculpture, Saint Gaudens. Another tendency of criticism in recent years is to put a finger on events since 1900 that are now seen to have heralded either the emergence of a spirit of independence or a deepened sense of the need for improved technique and the abandonment of sentimentality and mere picturesque nationalism. ''The Eight of 1908''—John Sloan, Henri, Luks, Glackens, Shinn, Davies, Lawson, and Prendergast—brought to their revolutionary exhibition at the Macbeth Gallery in New York in 1908 a vigorous independence and originality, not in their way of painting so much as in their way of looking at life. Theirs was a revolt against academic prettiness. They prepared the way for the modern movement and ''implanted in our subconscious minds the belief that all significant art has its roots deep in the soil that produced the artist, and that we must link our present with our past.''[18] Five of the group came from Philadelphia, where they had studied under

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[17] (New York: The Macmillan Co., 1915), p. 3.

[18] Helen Appleton Read, "New York Realists," *Whitney Museum Catalog,* quoted in Peyton Boswell, Jr., *Modern American Painting* (New York: Dodd, Mead and Co., 1939), p. 55.

Anschutz, heir to Eakins' realism; these five men had had newspaper experience, which made them aware of the brutal, ugly, but vital side of American life. George Bellows, Glenn Coleman, Guy Pene du Bois, and George ''Pop'' Hart undoubtedly owed much of their vigorous realistic sense to ''The Eight.''

Another recent event of great significance was the exhibition of international Post-Impressionist art in 1913, usually called the Armory Show, featuring the French modernists Matisse, Cezanne, Brancusi, Picasso, and others. This exhibition channeled the quarrel between conservatives and moderns; newspapers played it up, art critics were employed to lecture on the new art, and the public was all eyes and ears. Ironically, seven of ''The Eight of 1908'' were among the sponsors of this exhibition, which did so much to smother the realism of ''The Eight'' under the new aestheticism. But the results were all to the good. The academicians were submerged, the virtues of men like Weber and Marin (who had pretty well mastered the lessons of Post-Impressionism before the Armory Show) were recognized; in general, it appears that the ''American Scene'' school was slowed in its influence while a stronger technique was being learned. In very general terms, recent painting, so much of which deals with the American scene, represents a running together of the influences of which ''The Eight'' and the Armory Show were symptomatic. The latter drove home the lesson of simplicity of form and functionalism of design; and the influence of ''The Eight'' has persisted in the recurrent emphasis upon significant indigenous pictorial matter (which is not to be confused with mere picturesqueness). In the last ten or fifteen years ''the art of the American Scene'' has flourished perhaps out of all proportion to its intrinsic worth as art. Such men as Grant Wood, with his *American Gothic,* and Thomas Hart Benton with his melodramatic touch, have made it clear that an American art with American subjects can exist. The widespread publicity given to the art of the American scene in recent years has perhaps brought the greatest interest in art that has ever existed in America. At the moment, however, there is perhaps a trend away from this style, which so easily degenerates into picturesque regionalism.

Schools and groupings today are almost innumerable. All kinds of influences can be detected, many of them due to the increasing cosmopolitanism of American life, since so many fine talents have been driven to our shores from other countries. French influence in one way or another persists in the work of a very large number of the best painters. Two German exiles, George Grosz and Lionel Feininger, carry on their work here. Jean Charlot is French and Mexican. Rivera and Orozco, of Mexico, have been called to numerous mural assignments in the United States. Yasuo Kuniyoshi is the best-known American artist of Japanese descent. In the last twenty years, Negro artists and sculptors have made significant contributions out of all proportion to the social advantages extended to them. Besides the two main streams of tendency—the more formal painters who carry on the lesson learned from French Post-Impressionism and the ''American Scene'' painters who may or may not put into their illustrational painting a mastery of plastic organization—there are several lively experimental or radical tendencies, notably the non-representational or abstract school (Charles Sheeler and Raymond Jonson) and the ''socially conscious'' painters, who bring formal excellence to the statement of their message.

There is as yet no American style in painting or sculpture as there is, for instance, a decided Mexican style. America is still the melting pot. Of the top twenty practitioners in sculpture in America listed by Sheldon Cheney,[19] practically all were born outside the United States; those who are native-born are of French, German, Russian, Spanish, Japanese, or other foreign stock; all had their training elsewhere; and none are identifiable with any indigenous tendencies in the way that some of the painters are. Whether mixed blood and a variety of traditions will eventually give rise to a strongly accented American art is anybody's guess; but a majority of critics still express the hope that out of this eclecticism will come our finest art.

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[19] Cheney, *loc. cit.*, p. 100.

Extremely significant is the rapid development of ''industrial design'' in America. People who have not yet learned to tolerate modernism in painting and sculpture, take readily to the most advanced principles of design in compacts, bathtubs, automobiles, airplanes, and furniture. Most critics hold that after the Armory Show of 1913, and under the impetus of advertising, machine-made products began to be turned out in the honest, bold, clean-cut designs that machine production makes possible. Simplicity and functionalism of design are a cardinal principle of modern art, and however minor a place the ''arts of use'' must be assigned in comparison with the arts of expression, the fact remains that the industrial designer is an artist of a sort, performing a valuable social function in his indirect teaching that sound art grows out of the adaptation of style to need, to environment, and to the materials at hand. Various recent exhibitions of art in industry have revealed clearly that the modern painter and sculptor, on the one hand, and the industrial designer, on the other, have moved along together.

Today, as perhaps in any age, the most frequent complaint about art is that there is lack of appreciation and support for the artist. The creation of rarity values for paintings by publicity and the machinations of dealers allows a few painters to prosper, but permits the majority little if any market for their works.

> The business of art-merchandising is notoriously speculative, if not unscrupulous and unethical. Its methods are contrary to all idealistic notions of a civilized relationship

between those who produce art works and those who desire them. However rosy may be one's account of American art production, this reservation must be made regarding distribution.[20]

An exception may be made for print-making; co-operation of producers in the establishment of direct outlets to the public at large has brought the price of excellent lithographs, engravings, and prints within the reach of large sections of the public, and this activity is not confined to the large cities. Even the painters may have found something of a solution to their problem in the work of the Federal Works of Art Project. On the largest scale in history, a government has paid artists (at one time, some 5,000 of them) to paint. Mural paintings for public buildings have been excellent; the public has been made art conscious. Under FWA, as Boswell points out,[21] federal buildings in all parts of the country have been decorated at a cost of $42,638 less than was spent under the old system to decorate two buildings in Washington, the Supreme Court Building and the Archives Building; and, on the whole, the more recent and more widely spread work is superior to that which was let on a basis of favoritism and academic reputation. Painters and critics generally are enthusiastic about the main purposes and achievements of the federal project. Along with this great surge of activity in the arts has come a tremendous increase in museums and museum attendance, an ever increasing attention to art in the public schools and in some colleges, the development of traveling exhibitions of the best pictures, an awareness of the place of art in the life of the day. The signs of America's artistic maturing are more hopeful than at any other time in American history.[22]

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[20] *Ibid.*, p. 89.

[21] Boswell, *Modern American Painting*, p. 92.

[22] Almost exuberant is the hopefulness of the writer (and his advisers) of the section on "Art" in *Recent Social Trends in the United States*, the Report of the President's [Hoover's] Research Committee on Social Trends (New

ARCHITECTURE

In comparatively recent years, architects and architectural critics have engaged in rediscovery of America's past accomplishment in somewhat the same way that painters have sought out the high spots of the past in their field. The New England farmhouse is now considered to have been a beautiful adaptation of style to environment and function; and the New England town to have been a model of orderly planning. Throughout the whole colonial and early national period, good building was supported by honest craftsmanship. Lewis Mumford unmercifully damned the gingerbread and gewgaw building of the Gilded Age;[23] architectural historians called his attention to some facts of record, and Mr. Mumford discovered, to his delight, that the Gilded Age produced some men of vision, honesty, and power.[24] In numerous regions critics have discovered that some early builders were consciously or unconsciously following a principle of functionalism, notably in some Texas ranch houses and in the "pueblo" style of the Southwest. On the whole, however, the renewing of respect for past achievements does not mean that present-day architecture will be satisfied with imitating the styles of the past. Architecture today, to the casual lay observer at least, appears to be on the verge of more radical innovations than any of the other arts. The whole field is still confused. Some architects still build imitation Greek temples for American banks. Immense suburban subdivisions still call upon every style from English sodroof to French chateau. The jerry-built box on a fifty-foot lot still prevails

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York and London: McGraw-Hill Book Company, 1933), One Volume Edition, pp. 958-1008. The report deals not with the achievements of particular artists but with the question of the spread of facilities for art study and appreciation and with the maturing perceptiveness of the public.

[23] In *Sticks and Stones, a Study of American Architecture and Civilization* (New York: Boni and Liveright, 1924).

[24] In *The Brown Decades, a Study of the Arts in America* (New York: Harcourt, Brace and Co., 1931).

in lower priced subdivisions, with no attention paid to community needs such as freedom from traffic and accessibility of schools. So-called low-cost housing projects in the cities, where intelligent planning might be exercised, are often only glorified and modernized tenements.[25] To some architects the skyscraper is the very glory of their art; to others, it is a monstrosity in so spacious a land, and it costs too much in human comfort and dignity. Indeed, many ''advanced'' architects feel that their art is less and less one of planning the individual building and more and more one of planning the whole community to provide convenient space for factories, transportation, schools, recreational areas, and shops. If prefabricated building emerges to meet the demands of mass-production economy, the architect will have less to do with any given building, but he ought to have a great deal more to do with the community as a whole. The ''greenbelt'' towns sponsored by the federal government are a step in the direction in which many architects wish to go. At least one recalcitrant holds, however, that even these ''advanced'' projects take too little account of the mobility of the American people. On the whole, the United States has been slower to adopt new ideas than were even Germany and England before the present war. Speculation in inflated land values in crowded areas still makes impossible the spreading out of our people over the land—which would be the logical American contribution to the art of planning and building well.

MUSIC

In the field of music almost every sign is an encouraging one. The American people today are listening to more and better music than ever before. Radio chains have found that their most popular sustaining programs are those which feature a symphony orchestra or an opera. One chain broadcasts the New York Philharmonic Symphony programs on Sunday afternoons; another features its own orchestra under the direction of the most popular of all conductors, Arturo Toscanini; broadcasts of the Saturday afternoon opera performances at the Metropolitan have gone on for some years. Discounting the "snob" appeal that such broadcasts have, the fact remains that these programs have solid and steadily increasing popularity and are now standard in broadcasting fare.

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[25] Knickerbocker Village in New York is an example. In a nation which has forty people to the square mile (as compared with England's 750) we pack them a thousand to the acre in Knickerbocker Village. At that rate, all 130 million of us could live in an area fourteen miles square, as Douglas Haskell points out.—"Architecture," in *America Now,* ed. by H. E. Stearns, p. 110.

A quite recent development is the enormous increase in sales of phonograph records of both popular and classical music, a development due to two factors. The electrical recording with reproduction through record-players easily attachable to, or built in combination with, the radio, makes sound reproduction well-nigh acoustically perfect, inexpensive, and accessible. The increasingly good musical fare offered on radio has stimulated people's desire to own records of their favorite pieces and performances, which may be played at will. Furthermore, the phonograph record is the perfect device for the thorough *study* of a piece of music. By this means, thousands of persons who seldom had opportunity a few years ago to hear good music well performed are now thoroughly intimate with certain compositions and can, if they wish, master every detail of form and structure and take pleasure in every nuance of expression. The phonograph record is indispensable in the teaching of music appreciation (which is now a standard part of the curriculum in the better public schools); and it is the physical means by which many a listener becomes self-educated. The radio and the phonograph are an immensely important technological solution to the age-old problem of the dissemination of good music. Except where purely economic barriers stand in the way, no person can plead that he has no opportunity to listen to good music.[26] The sound-track of motion picture films also supplies a large amount of good musical reproduction. Community concert associations, too, have brought musical artists in person to hundreds of communities where attendance at such concerts has grown by leaps and bounds. Practically all the world's greatest artists are available in the United States for concert tours, for popular radio performances, and for teaching. So far as the physical means of the dissemination of good musical performance goes, the American citizen of today is the most fortunate of all ordinary citizens of all times.

A better key to whether or not music is a living art in America is the amount of participation in the performance of it. For a while after the advent of the sound-track and the radio, innumerable professional musicians were unemployed and private amateur performances in the home decreased, if the sale of musical instruments is a criterion.[27] The immediate effect of the proliferation of sound-reproducing devices was undoubtedly to discourage private performance. The long-run effect appears to be one of vastly improved musical taste, which will eventuate in increased desire to participate in the performance of music. Dozens of cities have symphony orchestras and choral societies which rely largely upon local performers. Every good high school has its orchestra and band, every college its band and glee clubs. The summer festival of high school orchestras at Interlochen, Michigan, is now famous. The Bach Choral Society at Bethlehem, Pennsylvania, has long performed brilliantly. Church choir music has improved under the ministrations of the Westminster Choir School at Ithaca, New York. In 1929, there were "911 musical activities maintained in 625 business and industrial establishments, such as department stores, factories, public utility companies and banks."[28] School music contests are held in practically every state. Many cities have departments of music connected with their park and recreational services. WPA orchestras have been organized in many cities. The number of musicians playing in dance orchestras and jazz bands throughout the country is uncountable. The originality and freshness of arrangements and orchestrations for dance orchestras and jazz bands is, to all but the academically-minded, sign of an indigenous American musical expression.

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[26] In so far as radio is concerned, the economic barrier is not a severe one. The Census Bureau estimated that 12,078,345 families owned radio sets in 1930; by 1932 this number had risen to 16,026,620, according to an estimate of the Columbia Broadcasting System. See *Recent Social Trends,* p. 988 and p. 211.

[27] Between 1925 and 1929 the value of musical instruments manufactured in the United States dropped from $164,392,000 to $77,843,000, and the number of pianos manufactured dropped from 306,594 to 132,404.—*Ibid.,* p. 990.

Better still, the American musician can now get his training without going to Europe. Instrumentalists, vocalists, composers, and conductors can get quite adequate, sometimes superior, training at such schools as the Curtis Institute in Philadelphia, the Eastman School in Rochester, or the Juilliard School in New York. In opera, once dominated by European-born singers, there are now numerous American-born and American-trained artists. As singers, Paul Robeson and Marian Anderson are eminently American. Deems Taylor's *The King's Henchman,* Dr. Howard Hanson's *Merry Mount,* and Gershwin's *Porgy and Bess* may not be works of supreme genius, but they are excellent, and they are indigenous. Orchestral works by American composers have been frequently performed by WPA and other local organizations, forcing upon the long-established orchestras, such as the Philadelphia, the New York, and the Boston, more and more attention to American works. The folk contributions of the numerous nationalities that live in the United States are kept alive by international festivals in such cities as Detroit, Boston, and Cleveland, where colonies of the foreign-born exist in large numbers. Characteristically American is the presence in all musical activities—performance and composition—of the names of people of non-Anglo extraction or birth. America has a world of traditions to draw upon.

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[28] *Recent Social Trends,* p. 991.

Still more important in the estimate of America as a musical nation is the question of what America has to contribute to musical creation. Creation, not dissemination or mere participation, is the final criterion. Here, practically every observer is optimistic. America has, in the folk music of her Negroes, probably the germ of the only really original modern music. The spontaneity and freshness of the Negro's undeniable talent—expressed now mainly in jazz, swing, and blues creations—has already made its impression upon composers of other nationality and tradition. The Negro spiritual is a profoundly moving creation of purest folk tradition. Even the fundamentally Anglo population of the United States kept its folk music more alive than any other art, except possibly the ballad. Public opinion to the contrary notwithstanding, America has, among its Negroes, its lumberjacks, its cowboys, its hillbillies, its rural Protestant shape-note singers, and its almost innumerable foreign-born minorities, exceedingly rich resources of folk music. The folk arts are broad-based, spontaneous, the source of all indigenous creativeness. American folk music will undoubtedly press upward into the stream of conscious and deliberate American composition, and will justify the rhapsodies of a certain critic:

> . . . America today is ''music-conscious'' with an intensity that makes ''sunny'' Spain, *Lieder*-singing Germany, tenor-bedecked Italy, the new self-assured Soviet Russia, the France that thrills to martial music, the flower-scented, guitar-playing Hawaii, the Hungary that seems to have devoted its life to rhythmic gypsies, and even the langorous strumming Far East—with an intensity that makes all of them appear almost tired and desiccated, compared with the surging vibrancy,

the eager assurance, and the new richness of our own American rush of melody. We are not now merely *a* but *the* music-loving nation of the world.[29]

In the dissemination of good music, in the wide-spread base of active participation in the performance of music, and in the potentialities for an indigenous creativeness of a high order—in all these ways, American music seems to have a very bright future.

SUMMARY

Looking back over our very sketchy presentation of the progress of certain arts in America, we find the whole picture very encouraging. Literature, having won its freedom to deal with the facts and conditions of American life, and having put its colonial imitativeness behind it, seems to be emerging into a period of concern with form and a solider understanding of the values of the past. The moving picture, if it has not found itself as a legitimate art form, has at least become the purveyor of excellent materials at times. The radio, despite its use largely as an advertising medium, has some sense of its social and cultural responsibilities. It broadcasts a steadily increasing amount of good drama, good music, and good discussion of public issues. The theater is alive and gives presentation of the best dramatic materials available. Dramatic writing is on a high level, and at least three practitioners point the way to a drama of lasting significance. The painter has come back from his expatriation to find a government and a public willing to afford him a means of practicing his art; he has rather successfully adapted the latest methods of painting to the material of the American scene. The architect, perhaps the most bewildered of all, is nevertheless possessed of social vision and fairly well prepared to meet change. Music is gaining listeners, American musical schools and teachers lead the world, American composers are coming into their own. Only the blackest pessimism can deny the progress in ''culture'' in America in the last fifteen to eighteen years. Whoever compares the symposium *Civilization in the United States* (1922) with another symposium, *America Now* (1938), will see graphically displayed the disappearance of self-doubt and the sense of inferiority, without, however, any lessening of the spirit of self-criticism.

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[29] Harold E. Stearns, *America: A Re-appraisal* (New York: Hillman-Curl, Inc., 1937), Chapter XII.

When we begin to think in terms of a rounded, indigenous American culture, however, the picture is not so bright. A culture needs a folk basis and our folk are being destroyed. Unemployment and shifts of population which are too sudden and rapid to cope with, seem to be destroying every element of stability in the life of large numbers of people. Every institution is unsettled. Stability is not the only virtue, of course; many apologists of the modern era argue that never before has man had such freedom of movement, freedom of choice of occupation, freedom of alternative as to how he shall amuse or entertain himself, freedom from taboos, freedom from the past. This may be true. But heretofore great cultures have flowered out of some kind of folk stability. Many critics today see modern civilization as disruptive; it gives a man too many alternatives, too much freedom, and not enough backing. Spengler has painted a striking picture of modern Megalopolis, the world-city, where ''finance'' has replaced realistic economics, where entertainment has replaced the arts, where everything to tickle the fancy and the senses exists in abundance but nothing is there to satisfy the soul. Megalopolis comes in when Culture goes out, according to Spengler, and Culture exists when a centralizing idea or faith is in the ascendant. Spengler implies, therefore, that America is not the first of the new, but only the last of the old, representing only a geographically detached section of Europe, going down like Europe in the anarchistic confusion of decadence without ever having had any of Europe's rich past.

But to Americans for three hundred years the glory of America has been her freedom from the past. The promise of America has always been the promise of a *democratic* civilization. On this continent, perhaps in this whole hemisphere, various races, after time and the environment have done their work, may achieve an American "acculturation,"[30] with a democratic or "mass" social organization, an American art and architecture and song. Some people think such "acculturation" will be automatic; that given enough time, it will simply come to be. Others think that it must be willed. At least a truly *democratic* culture must be willed. It can grow only out of the will to achieve tolerance, preserve liberty, develop community sense, and respect the "durable satisfactions" of life.

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[30] The word is used here not in its strict ethnological sense, but, as in much recent writing, to mean the ultimate adaptation of man and his ways to his environment. It implies a kind of automatic adjustment, requiring time.

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XVI. AMERICAN EDUCATION TODAY AND TOMORROW

IN the history of American thought roughly five important movements may be identified: (1) Puritanism and Calvinism, (2) democracy, (3) transcendentalism, (4) Hegelian idealism, and (5) pragmatism or instrumentalism. Accompanying these, two great social phenomena have had far-reaching and permanent effect; namely, the conquest of a continent and the emergence of technology. American life today contains large deposits from all.

All Puritans were Calvinistic, but not all Calvinism was Puritanic. New England Calvinism carried on in America many cultural and intellectual traditions imported from middle-class England; Scotch-Irish Calvinism, bred in poverty, transplanted to the frontiers of America a literalistic and non-intellectual way of life, in many cases thoroughly antagonistic toward rational exercise. Yet out of Calvinism America has derived much of its respect for ''rugged individualism,'' coming in turn from a fearless readiness to face hard and evil things in the world, and a will for conquest of that world founded upon certainty of co-operation in a divine plan.

The democratic philosophy of men like Franklin, Adams, Jefferson, and Madison was no naive sentiment; it probed the whole realm of human rights and launched a bold social experiment based upon what was felt to be irrefutable logic, centering in the inalienable right of every man to certain ways of expression, unhampered by previously imposed social restrictions.

Transcendentalism again stressed individual worth, but expressed itself more poetically than either of the preceding movements. It broke with Calvinistic literalism and fatalism, and pointed to broadened visions of man and his world; but, while Emerson himself was an intellectual, transcendentalism contained doctrines that could deteriorate into soft and queasy sentimentalism.

Both Puritanism and democracy centered about revolts against hierarchies that exerted arbitrary, galling authority over human liberty. They were reactions. Transcendentalism was a reaction against the stultification of a decadent Puritanism. In turn, the vogue of Hegelian idealism in America represented, in considerable measure, revulsion on the part of tougher intellectuals toward the romanticism of transcendentalism. Hegelianism as a philosophy retained the sense of vast spaces and of human dignity, but placed reason rather than feeling at the base of things. It heartened the thinking man, who felt that logical system was not to be thrown over for pure insight. But Hegelianism in its turn lost power. Its abstractions, susceptible to some of the vices of scholasticism, moved too far away from the human plane where they originated. And meanwhile another movement, known as pragmatism, strengthened the intellectual reaction against Hegelianism.

Calvinism, democracy, and even transcendentalism fitted admirably into that version of American destiny which envisioned the conquest of a continent, the glory of a great free people, stretching from ocean to ocean, enjoying the fruits of their labors. It was a brave vision, and one that owed its fulfillment largely to the qualities of the men who dreamed and lived it. But while it developed, another activity approached a culmination that was to affect American life more rapidly than that of any other human group—the movement known as applied science or technology. Its origins, of course, lay in pure science, but America, with its peculiar ''mission'' of conquest and human liberation, has been principally concerned with applications, and it is a commonplace that the average American enjoys more of the fruits of those applications than any other world citizen.

Pragmatism was directly and most effectively a reaction against the abstraction of its intellectual predecessor—Hegelian idealism; instrumentalism, in a more positive manner, has attempted on the one hand to step further back into scientific backgrounds, and on the other, to link its thinking with social problems. Calvinism and Hegelianism were importations; democracy, transcendentalism, and instrumentalism are American intellectual products in a more completely indigenous sense. Today, particularly in the educational field, the instrumental philosophy is dominant, but once more there are signs of reaction, not only in terms of older values it has either taken for granted or ignored, but also in terms of a broader synthesis.

PRESENT-DAY WEAKNESSES IN EDUCATION

It is our thesis that education suffers today from too much romanticism—as derived from certain implications of our American pragmatism, together with our humanitarianism and equalitarianism—and too much literalism, and it is easy to see how these relate to American intellectual history. At the same time education has been and is being profoundly affected, both directly and indirectly, by the impact of technology.

When William James, in his development of pragmatism, argued for a certain ''tough-mindedness,'' it was an *intellectual* quality he sought. He wanted philosophy to come to grips with the work-a-day world, but in terms of the intellectual world. However, attractive as this may be to common sense, there are some phases of pragmatism susceptible of prostitution; for example, the doctrine of making a difference. In practical human life, those things which are commonly esteemed as making most difference are power, wealth, social prestige, possessions. If truth, or highest value, is to be gauged by a criterion of "making a difference," and this difference is to be interpreted as the degree to which contemporary life applauds, or fawns, or discusses, then some of those values which great minds throughout the history of thought have rated highest, rarest, and most difficult of achievement are, after all, not so important. Such a doctrine places emphasis upon performance only. It takes no account of the potentialities of human personality. Heroism, martyrdom, poetry, even logic may reside in unsuspected quarters; the potentialities are present, but the circumstances necessary for their lofty expression may never have occurred. It requires a Bataan or the sinking of a *Lusitania* to discover unsung heroes and unknown cowards. Such qualities are spiritual; they are not always obviously objective or effective, and the making-a-difference doctrine almost inevitably deteriorates into stress upon the obvious, the popular, the "going thing." In American life where the objectivities of business affect us so profoundly this doctrine is apt to find ready acceptance. But as Mecklin [1] has effectively pointed out, when Puritanism dropped its spiritual elements, its sense of responsibility to God and man, and concentrated upon mere accumulation, it became a crass thing, reaching its climax, probably, in the "Gilded Age." Happily, this barbaric love of size and quantity has been tempered by other influences, but too much of it still prevails, and education has received its impact in increasing measure as older spiritual influences have waned.

Neither pragmatism nor business stresses deferred values, and neither in its own sphere is respectful toward past standards. Their common concern is the immediate problem, its successful solution in terms of the present. Moreover, it should be pointed out that such a concern readily slips down to the plane of mere feeling. It is possible (indeed, most people tend) to regard today's problems as problems to the degree that they give us present discomfort, and that answer which gives the most immediate relief may be looked upon as the most satisfactory solution, though neither history nor biology will give unqualified assent to such a point of view. Here, as elsewhere, the original positions of pragmatism have been misinterpreted and wrongfully used, it is true, yet they are easily subject to this kind of misunderstanding.

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[1] See John M. Mecklin, *An Introduction to Social Ethics,* Chapter II.

In education we have heard the constant cry that the school must fit into and become a part of the life about it. But there has been little concurrent questioning as to the fundamentals of that life. Uncritical of—in many cases, enamored of—the mores of business, school administrators have increasingly introduced them into the educational world. It is true, America is probably most distinctively American in its business life. Certainly the nation would not be what it is today, had its industrial history been different; and there is little sense in attempting to run counter to what is palpably the American genius. But that life and its ideals are not always scrupulous nor sensitive to human values. It is both impossible and undesirable for American education to escape the influence of American business. But education is not merely business transferred to the school room; its scope and its ideals should be as broad as human life itself.

As a result of their environment, school administrators find avoidance of conformation to a preponderantly practical outlook extremely difficult. They become heads of systems or institutions with which communities have vital economic concern. Their duties relating to physical appurtenances, with emphasis upon accounting, upon size, numbers, and quantity, tend to take on prime importance. They develop, almost inevitably, into promoters concerned with objective externals that compel popular attention. The men with whom they deal regard school plants as physical assets to the community, and in the case of institutions of higher learning the size of enrollments, the drawing power of football teams, the payroll of faculties have financial and social repercussions locally which administrators are never permitted to forget. The slogan of ''bigger and better'' always naively implies the interdependence of these qualities, and community sentiment imposes an almost inexorable pattern of conduct upon institutional administrators in these terms. They too readily become, in consequence, first, business men; second, politicians; and, third, educators. Pragmatism has thus inadvertently encouraged promotiveness in education. It has also made itself felt by way of vocationalism, utilitarianism (in the ordinary, not the philosophic sense), stress upon ''activity,'' and its emphasis upon the immediate, with the implications this holds with respect to the importance of the feelings.

Vocationalism should not be an outlaw in education. Vocation is the principal avenue through which most men and many women find the way to both social and individual expression. Dewey has shown its wider social aspects in a manner that needs no amplification. But for most of us vocation provides also our principal mode of individual expression. For the scholar, the artist, or the statesman, that expression is obviously on a sufficiently high plane to divorce it from the taint of vocationalism; but most people work on the level of teachers, or artisans, or government clerks. And that way of life must serve the average man quite as completely as higher callings serve the great. To the degree that larger proportions of the population are included in the educational process and to the degree that technology continues to spread its influence in modern civilization, specialization, and hence, vocationalism, will continue to increase. The danger lies in the excess use of it—in thinking of life as *all* vocation, or in thinking of vocation merely as means to accumulation or prestige. There can be no doubt that this abuse has existed widely, and that certain emphases of pragmatism have encouraged it. Such abuse certainly is not justified, however, in the writing of John Dewey, nor is it to be abolished by way of eliminating all vocationalism. From any point of view that faces relationships with modern multitudes of students—some brilliant and ambitious or unambitious, some mediocre and ambitious or unambitious, some dull and still ambitious or unambitious—vocationalism is a basic necessity in education. But it is a stimulus and a mode, not a prime end in itself.

Of utilitarianism and vocationalism, the former is subject to narrower and harsher limitations. It is granted that utilitarianism has its place in education as truly as it has a place in life. Even the scholar in the most abstruse of subjects can never leave the work-a-day world out of reckoning. But this way lies danger. Those with little learning are likely to be humble in the face of their own ignorance. Those of mediocre learning, when ''successful'' in ''practical'' fields, are not only not humble; they are often aggressively hostile toward all higher levels of learning. Possessed of such power as may accrue from their acquisitions and the prestige such acquisition bestows in a business civilization, ignorant of past culture and uninterested in the finer aspects of present-day civilization, they may become the most serious menace that liberal culture and liberal education have to face.

The degree that ''activity'' has become a fetish in education is common knowledge. It has received support both from American psychology and American philosophy. In his *Democracy and Education,* Dewey wrote: ''. . . mind is not a name for something complete by itself; it is a name for a course of action in so far as that is intelligently directed.'' Now it is true that Dewey here carefully qualified his concept of mind as action. Indeed, he went on to add that it is a ''course of action'' in so far ''as aims, ends enter into it with selection of means to further the attainment of aims.''[2] Yet this passage has been reduced in at least one textbook on secondary education[3] into the unqualified heading: ''Mind is a Course of Action.'' It is this kind of garbling, of course, that lends authority to the teaching of extremists. And it is this kind of emphasis in secondary education that leads to the belief that extra-classroom activities are the really important venture in college. Sidney Hook may be able to say: ''. . . . contemplation, the favorite activity of philosophers, since it has definite consequences, is one form of action;'' nevertheless, ''doing things'' means, for the average citizen, activities which produce results that are easily and objectively observed. But a difficulty arises for ''activities'' in relation to higher education, where the further one goes in the process, the less ''practical,'' the more ''intellectual'' education becomes. In its upper levels, by its very nature and constitution, it is concerned with superlative quality, with the highest reaches of mind and spirit, with the type of problems that few can comprehend or master.

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[2] John Dewey, *Democracy and Education* (New York: The Macmillan Co., 1916), p. 155.

''Activities'' can hardly be passed by without a word about athletics—another legitimate and wholesome phase of the educational process suffering from excesses. Athletics, perhaps more than any other department of high school or college, have felt the influence of American business, and the reasons are not far to seek. Business has been set in terms of strenuous hustling, of amassing, of advertising, of competition, conquest, winning. Upon the football field it sees something to which it feels an irresistible kinship. To begin with, this appreciation was a vicarious appreciation; today in many situations it is becoming a case of actual management and competition among business groups who move directly[4] or indirectly on to the campus, who ''lash out,'' as the journalists have it, at the too indifferent faculty member or one so bold as positively to oppose the excesses of the program, and who have even been known to carry the question of support of teams in the form of "scholarships" into state legislatures. At the same time requirements for real scholarship for team members have become so low in some college conferences that they would not pass muster in a serious high school program. The difficulty is that educational administrative officers cannot be involved in situations of this kind and, spiritually speaking, keep their hands clean, though clean hands, figuratively, in the field of scholarship are just as vital as clean hands, literally, in the field of surgery.

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[3] Cox and Long, *Principles of Secondary Education* (Boston and New York: D. C. Heath and Co., 1932), p. 253.

[4] See, for example, "Football is a Banker's Game," *Look*, Sept. 12, 1939, especially the excerpt: "Los Angeles doesn't ask for a winner—it demands one. A team in that town is an industry, and it must pay dividends in the form of national publicity. Or else!"

There is another element in the situation explicable in terms of the American outlook. America has been a land of romance and enchantment from the day of its first settlements. Added to the lure of freedom, whether religious or political, there has always been among its people the dream of wealth, economic release and prestige, the imagined bliss of El Dorado. As long as the public domain included great unexplored treasures in the form of national resources the dream was to be realized in their exploitation; later as these passed beyond the reach of the masses, the roseate vision took the shape of giant organization, production, and control of industry. This last-named phase is still with us and deeply affects the outlook of the public upon sports, upon the fundamentals of education, and upon the purposes of higher education.

The American continent has been won from the condition of the wilderness by the same virtues as those that win football games—the stadium looks down upon the story of the Wild West in miniature—and the unquestioned validity of these virtues in many minds is vouched for by the popularity of the doctrines of a Dale Carnegie, whose methods and thinking resemble those of cheap evangelism.[5] The carry-over into education in extreme form may be illustrated from the catalogue of a famous business ''college'' on the West Coast. One section is headed ''College Education for Business Leadership'' and the next ''A Profession of Romance.'' Their tenor may be gathered from the following excerpt:

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[5] See the descriptive article by Jack Alexander in *The New Yorker,* Dec. 11, 1937.

> Think of the romance of Business! There is no other field of human endeavor that appeals so irresistibly to the imagination. The mere mention of the word ''business'' brings to mind a vision of vast cities teeming with commerce; great ships sailing the ocean, carrying to other peoples the products of our business and industrial enterprise, or bringing to our shores the products of every country on the globe for our use and enjoyment; railroads criss-crossing the country; airplanes speeding the correspondence of commerce across the continent in a day; immense banking institutions; intricate systems of distribution—all so colossal as to almost stagger the imagination. . . . The young person who loves to people his imagination with ''the great figures of history'' will find supreme inspiration in the stories of the building of our great railroad systems; in the mystifying multitude of new manufacturing processes, making possible the creation of thousands of new products for the use of the people; in the building of great tunnels and skyscrapers; in the immense oil fields, with their inseparable contrasts of dry holes and gushers, of disillusionment and boundless joy, of sudden poverty and fabulous riches; in the mighty mills and foundries with their belching furnaces and crash of metal. . . . Back of the scenes in every industry, in every successful business institution, there is a human interest story of transcendent appeal. Business offers more thrills than the most exciting sport, and the intensity of interest never wanes. No previous generation ever had such magnificent opportunities for thrills as has this generation. Why, the battlefields of old, with their armored knights, were tame in comparison with the battle business is waging. Indeed, the joy of romance and adventure is just dawning . . . *for you.*

This kind of appeal is evidently effective, for the same booklet recites the dimensions, costs, and accompanying magnificence of the new ''plant'' of the institution just completed.

The thinking behind this organization is thoroughly consistent.

The seriousness of the situation lies in the fact that romanticism is permeating all American education, including that which is supposed to be ''real'' college work. Freshman classes in too many colleges contain tragically large numbers of those who believe that college can endow anyone who is willing to yield himself to the educational process, no matter what his will or his capacities, with the qualities of a learned and educated person, and those who, though they have abundant ability, have been taught to believe that ''personality'' counts most, that ''mental power'' is the mark of the ''highbrow.'' Both groups have been led to feel that education is a process in which the student is a patient who casually absorbs. Mental struggle, logical concentrated thought, mastery by way of problem-solving are unknown quantities, and those of this group who make a success of higher educational processes have first to break habits of years' standing. College faculties on the whole have not surrendered to this kind of thing, but some administrators have done so, and the pressure in this direction is affecting constantly greater numbers of college teachers.

Sentimentalism in education derives in part from American history and the physical environment in which American life is set, which in turn have encouraged some of these pragmatic inferences that have been outlined. But it is also the heir of Christian humanitarianism and evangelism, the Baconian vision of material progress through science, the romanticism of Rousseau, the utilitarianism of Bentham, and the transcendentalism of Emerson. The American environment has encouraged equalitarianism, as we have seen. Among certain groups the current in this direction moves strongly out of this thinking of the past; among others, particularly in the economic field, it results from the growing consciousness of power within the ranks of labor and rapid mass movements over the entire world. But such equalitarianism does not discriminate. The individual or the group with a sense of new and growing power does not take kindly to suggestions of limitation. New privileges having been attained by shaking off old restrictions, the natural assumption is that all limitations are imposed from without, not the result of inherent lacks. Attempts at differentiation of schooling, therefore, in line with variation of ability, may meet with resentment and remarks about the privileges of taxpayers. The outcome is a low ebb of intellectual standards in many of our public high schools today. It is the sad experience of college admissions officers that secondary school marks, even in subjects presumably of an intellectual nature, are sometimes not to be trusted. In such cases, large store is set by "effort," the level of accomplishment is established by the average of the group, and really capable students drift into vicious habits of mental dilly-dallying.

Today America is muddled in the matter of standards in morals, in law, in religion, in philosophy—and, consequently, in education. Standards are custom-built. In consequence, they usually reach the status of uncritical acceptance, and such a status easily becomes dangerous to liberalism. On the other hand, too great confusion of standards or the flouting of standards altogether can be just as dangerous. Discussing the position of the "realists" in law, who insist upon reducing it to a pragmatic basis and to terms of what actually happens in cases, not rules and principles, Zachariah Chafee, Jr., remarks:

> The satisfactory administration of justice necessitates something more than an accurate description of the isolated acts of the men who have recognized powers to put us in jail and seize our property. Any official who takes his job seriously will seek some *standard* as a guide for his conduct. This means that he must go outside the facts of the particular situation, if only to toss up a nickel. . . . Unless every case is to be regarded as unrelated to every other case, we must formulate links between them, and these links become the

legal rules which serve as the *standards for action*, even though not always lived up to.[6]

Approaching the problem from another angle, John Herman Randall, Jr. questions the finality of either empiricism or reason. Knowledge is clarified by requiring experience and ideas to confront each other.

> The appeal to experience, like the appeal to reason on whatever level it is made, is a moment in a process of criticism. This solid fact has implications. . . . It implies that philosophies of experience which start with experience as a subject-matter are in fact starting with certain ideas of experience, and those which end with experience as a conclusion are in fact ending with a certain experience of ideas. And a whole range of philosophies, including most of those called empirical, stand condemned as inadequate, unenlightened, and blind. We must start with tradition, and we must end with tradition criticized, clarified and enlarged.[7]

The *bourgeois* mind, as well as the ignorant mind, likes literalism. Literalism supplies the answers about the final problems of life, and releases one for attack upon the "really important" affairs of the work-a-day world. The incompetent mind avoids abstract thinking through both inability and fear; the *bourgeois* mind may do so through fear or as a matter of convenience; thinking in terms of concrete "things" and immediate situations and values may be, for it, a more attractive pursuit. The Calvinistic literalism which set the pattern of early American life, and persisted through the nineteenth century, has been shattered by science. It has meant a loss of standards both because of the toppling of authority under this guise and because of the loss of a certain spirituality which increasingly as we look backwards accompanied life when conscientiously lived by that authority. Our Puritan forbears had qualities we sometimes sigh for today because, in freeing ourselves from the rigidity of their literalism we have admittedly lost worthwhile values. But, quite obviously again, any new standard must be set in new terms.

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[6] See his chapter on "The Law" in *America Now,* ed. by Harold E. Stearns. Quotation from p. 317. (Italics not in the original.)

[7] J. H. Randall, Jr., "Historical Naturalism," in *American Philosophy Today and Tomorrow,* ed. Kallen and Hook (New York: Lee Furman, Inc., 1935), p. 421.

FUNDAMENTAL QUESTIONS IN EDUCATION

At this point, therefore, the effort will be made to set down very briefly a working basis for American education, in the light of both the conflicts that have been described and the ''organismic'' synthesis in a measure foreshadowed in modern science. It will be approached by way of five basic questions.

1. *Why do we teach?* We teach in order to maintain and to develop the social heritage, but always in terms of individual sharing and individual contribution. Education is an activity developed in response to broad human needs. Like government and religion it fulfils special functions in civilization, and, like them it has its agencies for this fulfilment. But in this, as in all human activities, we are faced at the very beginning of its analysis by an inescapable dualism—the self and the environment of the self. Any attempted appraisal of human need is inevitably drawn back to individual experience; it has meaning for us only as perceived and integrated individually. Yet no modern human being is such when divorced from either the nature from which he springs or the human group and the human heritage with which and by which he lives. Individual achievement takes on significance in a civilization only in the light of those backgrounds. As Jennings puts it, ''The biological specimen plays the part, not only of an actor in the world, but also of an interested spectator of the world.''[8] It is possible, of course, in certain types of philosophical thinking, to break down this kind of dualism,

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[8] H. S. Jennings, *The Universe and Life* (New Haven: Yale University Press, 1933), p. 9.

but only as nature, selves, and society become merged in some great whole. In educational thinking and in the educational response to human needs it is pretty safe to say it will continue to exist.

Education, therefore, can never lose sight of either individual or society. Philosophies, movements, or emphases that stress one at the expense of the other are destined to be discovered astray sooner or later—sometimes with a considerable sense of shock—and true direction can be recovered only by keeping both these poles of thought constantly within view. Meaning and significance take form just so far as individual and society interact. Society maintains educational processes for its own preservation, yet through individual variation, individual development, and individual contribution social attitudes and social structure are always subject to change. This educational process, therefore, is never finished; and it bids fair to become more, rather than less, complex.

2. *What shall we teach?* It is evident that when we approach education in terms of human survival and human development its scheme must have place for both old and new. Knowledge of traditions, customs, standards, principles, laws, techniques, all manner of fine human expression that has proved of long-time value to the race, is worthy of preservation. On the other hand, such heritage can never be more than a background for new human achievement. Since men live in the presence of a phenomenon we call physical change, and since life manifests itself, from the human point of view, through individuals with separate identities, no two human beings and no two human groups can ever have identical environment, either natural or social. Every individual has his own life to live, his own self to achieve, and no other in all eternity can duplicate that self or achievement; as is also true, of course, for social groups or collective ends.

The array of human achievement is staggering, far beyond any individual capacity to comprehend. The day of Francis

Bacon's *Great Instauration* is forever in the past. Yet the individual is heir to and shares in a total civilization. He enjoys his well lighted home, though he knows nothing of the secrets of making glass, or tungsten filaments, or dynamos; he learns and cherishes a beautiful poem though he himself could not produce so much as a line of it. All skills, all knowledge, art, and wisdom, are racial possessions, and if of long-time value, are worthy of survival. Indeed, if they have such value, they should become rather more than less the possessions of mankind as a whole.

But the term *value* is not to be compressed into narrow measures; certainly the most precious possessions of the human race are not reckoned in terms of physical pleasures and comforts, else the word *human* loses its significance. Education, therefore, has the tremendously responsible task—always dual—of meeting social needs and individual needs through the choice of and provision of appropriate materials, under appropriate conditions. It must search the social past constantly for material usable in the social present, and it must know both past and present in its efforts to set up guide-posts for the social future. At the same time it must work in terms of individual students, undergoing individual development. When the teacher addresses the class-group, every individual in the class has to make two applications of the material or the situation encountered—one in relation to his own inner life and satisfactions, one in relation to his fellows. Given material, activities, or situations may bear specific reference to one relationship or the other; the teacher may not lose sight of either.

Educational material can be dichotomized roughly into the human and the extra-human, dealing with man and his natural environment. Yet even so broad a classification contains a fallacy if it leads away from the realization that man is part and parcel of nature, can never in any final sense be divorced from it. He needs to know that a great microcosm reaches down into the infinitesimal below him and a great macrocosm reaches out into the infinite beyond him; that his own roots are enfolded in this same nature, that he is related to all world-stuff, that he and it are caught in a current called change or process, and that, therefore, he is constantly confronted with problems of adjustment. He needs to know the sources and measures of his control over his natural environment, and his possible future relationships to it; that it is his uniqueness as a member of the human race that gives him this control, and as much as we are able to teach him about that uniqueness; that learnings and appreciations and insights into values on the part of the race are transmissible and therefore cumulative, and that he is heir to racial achievement to the extent that he is able to assimilate it.

But he needs to know, also, that civilization is relatively young; that the human being still bears marks of the jungle; that civilization is accompanied by innumerable clashes of will; that past and present are full of human suffering and disaster, and that because of this as well as other phenomena of "process," he must possess adaptability to social disruptions. He needs to know, therefore, that there are some emergent values in human history to which humanity has found it worth returning many times, and which, so far as we can now see, he can well preserve for the future. Some such fundamental wholeness of outlook, together with a large amount of other knowledge that satisfies his needs, belongs in his rightful heritage of learning; though the detail of it will have to be fitted to his peculiar individuality.

3. *Whom shall we teach?* Every individual—weak and strong, dull and brilliant—except the social menace, has the right to an outlet for his expression through playing a social part. Democracy owes equal responsibility to the dull child from the rich family and the brilliant child from the poor family. But it will not prepare the two for equal functions in society. Every individual must be furnished with that preparation which equips him up to *his* limits. This is the doctrine of democracy, but it works in two ways—privilege for those

qualified by way of ability and integrity, limitation upon the unqualified. Our American educational system contains the whole gamut of this human variation; it has got to learn how to deal with it effectively.

Variation is the inevitable complement of process or change. Identity implies in human terms a unique organism. One rock and another, one man and another may all be made of the same stuff, but each is a discrete organization that comes and goes. Ability in the human being to thrive (as dependent upon vital energy), to survive, to adjust, to learn, to remember, to evaluate and so on, varies apparently in terms of both individual make-up and environmental influences. What he *is* is the product of organism reacting to a given environment. Rear a Chinese child from infancy in an American home and you don't have what we ordinarily mean by a Chinese child.

Again, variation is apparently to be construed partly in terms of discrepancies between capacity and performances. Individuals judge other individuals necessarily by objective evidence. Intimate acquaintance with someone means a wide range of acquaintance with that person's expressions of himself. And what we commonly mean by achievement is self-expression in a social medium. Thus a given individual may measure up to what we call greater human achievement under one set of circumstances or conditions than under another. In one situation he has "drive," exerts himself to the utmost and "succeeds"; in another his performance falters and "fails." Such a discussion is reminiscent of the old controversy as to the greater importance of "being" or "doing." But if we think of being in terms of capacity, it makes for the immediate precedence of being. Given the capacity, the individual may achieve, though there is no certainty about it; without the capacity the individual will certainly not perform in some ways. And the problem is not altered, at least for the present, by insistence that variation in capacity is the result more completely of either heredity or environment. Education still has to deal with variables and variations.

However, in a complex democratic society the fact of natural variability should be welcomed. Such a society is posited upon the doctrine of *every* man's importance, but always in terms of his making a unique contribution to the common good. A society will be vital in the long run to the degree that it imparts meaning to both individual and social life. In Germany, in Russia, or in China today it is evident that much of the strength of movements under way is imparted by youthful devotion to communal (or national) ends. But in the cases cited, the ends are imposed either by regimes over which the masses have no direct control or by external circumstances. Democracy presupposes freedom of ends or goals, evolved in response to mass needs and aspirations. And it should be plain that such a philosophy depends for its very existence upon individual variability. The individual has an inalienable right to live his own life, to express his own self. Yet the doctrine in no way divorces him from his social medium, nor frees him from social obligation. Nor does it eliminate leadership; rather it calls for a different type—an interpretative and disinterested, instead of an imposing and dominating, leadership. A society so balanced is, and probably will remain, an ideal never to be completely realized in this mundane life, but the more challenging because the more difficult.

4. *How shall we teach?* Education is social and institutional. In a democracy it deals, as we have seen, with all manner of people and in all manner of learning. In America, therefore, only one legitimate attitude may be assumed toward it—the liberal. As a democratic institution education must play host to ideas. Each of the philosophies or points of view presented in the preceding chapters of this section was found to have both strengths and weaknesses. Even social gradation has eventuated in certain types of leadership and cultural conservation, the benefits of which, within their spheres, are

not to be gainsaid. Certainly, too, literalism, however much the liberal may deplore it, has given the world noble performances, generating courage and steadfastness, of which we could well use more in the modern world. (As previously pointed out, communism and Fascism both owe their strength, their ''driving power''—in the wrong direction, we feel—to a type of literalism). Similarly, both equalitarianism and humanitarianism may be interpreted in inspiring terms or they may degenerate into insipid drivel. Humanism may stand four-square upon its insistence on the recognition of human excellence, or it may fall into the slough of intellectual snobbery; idealism may point the way to an inspiring view of reason and good and beauty in the world, or it may become involved in repellingly abstract and meaningless absolutes; pragmatism may insist healthfully upon thinking in terms of here and now, the social and the scientific, or it may become so involved in the present as to lose sight of both past and future and some of the spiritual standards and values that man has found and continues to find worth living by.

The human race would seem to have left behind the periods of unified outlook such as have occurred in Eastern civilization and in the Middle Ages of Western civilization. The deposits of our human heritage are becoming too rich and varied to admit of any one sweeping view. Yet, the human being, himself a ''unit'' and an ''organization,'' craves unity and organization. Every life, by its conditions within time and space, contains certain of these aspects, yet we account some human lives much better synthesized and organized than others. Education, of course, again has responsibility in this direction. Out of a vast range of materials—technical, intellectual, physical, social, ''spiritual,''—education faces the task of making choices and adaptations for endless combinations of capacities and drives that will eventuate in individual and social synthesis. Such a program calls for liberalism among individuals, for democracy in the social group, and under it, ideally, no individual fails to find his place, his manner and sphere of expression, and his destiny.

5. *Who shall teach?* Such a program calls also for teaching in general of a more nearly ideal character than anything we now know. Teachers should be synthesists and induce synthesis in others. To fulfill their true function they will see life "whole," they will approach it creatively, and they will regard it independently. Before they can attain stature in the profession, direct or indirect contact with great areas of human life will be essential. Creativeness and synthesis presuppose wide acquaintance and they demand drive and objective. Weaklings, confused wanderers, idlers, dilettantes should find no place in education. To the degree that teachers make successful synthesis in their own living they will make the outcome attainable to others, not by imposition but by induction. As in every institution, there is a place in education, no doubt, for humble hewers of wood and drawers of water, for people who take simple direction from others, but who can take no large responsibilities; professional fulfillment, on the other hand, must be conditioned by a certain intellectual comprehensiveness. My child's kindergarten teacher must possess more than a few techniques and a love for children. To the degree that she is professional she will have a continued intense interest in mankind and in man's environment. Fundamentally, the pursuit of all knowledge relates to this goal. Such a quest may be direct or indirect; it may become debased into mere ritual or pedantry, but originally it is fresh, vital and stirring, and the really professionally-minded will never lose touch with that sense of freshness. Hence, the real teacher will not be afraid of "intellectuality." Man's interests have been said to run basically to things, people, and ideas. The three can not be completely separated, of course, but they may designate certain emphases. The psychologist is interested in people in a manner quite different

from that of the so-called ''socially inclined'' person who wants people about for the sake of the stimulus and entertainment they afford. The physical scientist is interested in ''things'' from a different point of view from that of the acquisitive trader. The psychologist and the physical scientist prefer the ideational approach. Being on daily good terms with ideas is part of the attitude of constructiveness, a requisite for human development. It cannot be required in large degree from great numbers of students; it can and must be required from the professionally-minded. The modern teacher is not simply predisposed toward his work by virtue of having grown to maturity; he must possess certain unquestionable attitudes and abilities; he must have had certain indispensable experiences that lead to both breadth and integration.

TOWARD APPLICATION

Our American phrase, ''equality of opportunity,'' needs analysis. We are fond of imagining an ideal state where every individual might realize ''full development'' or ''development to the full of his capacities.'' But a moment's reflection discovers difficulties in the way of such an ideal. Probably most average young persons have innate capacity for development into individuals of superior physical strength and agility, if they but submit to long and arduous periods of training. We could produce thousands of ''strong men'' and ''strong women'' if civilization demanded. Today we are turning out such thousands with the technical knowledge requisite for operating airplanes; fifty years ago nobody was so trained. So we might develop latent musical abilities, or mechanical, or social abilities in many ''average'' individuals until they surpassed most other people. But from such consideration several questions emerge. For example, what are the demands of the civilization in which a given individual lives? In the light of man's past achievements, and his most enduring appraisals of human value, how just, opportune, and satisfying are those demands? What is the common body of knowledge necessary to living in a given civilization? Does this individual possess special endowments which seem to point to possible unique attainment? Does his interest run in the same direction? To what extent, or for what period of years, can society afford financially to keep *all* its young people fully occupied in formal educational processes? When is a special talent of sufficient value to society to justify taking public funds for its development? What ''returns'' does such a beneficiary owe the society that educated him? Is society justified in taking from the mediocre person of superior economic means some of those means to support the person of superior talent without economic footing? We may approach some of these questions through consideration of educational institutions.

EDUCATIONAL INSTITUTIONS

The institutions of education have served three general purposes. First, they have instructed the young; second, they have served as a depository of learning, of the heritage of civilization; and third, they have attacked along with other agencies the solution of all kinds of problems—both new and abiding—and the evaluation of current practices and products. The second and third of these objectives grow in importance as the so-called higher levels are approached. Elementary schools, as institutions, confine themselves largely to teaching and guidance, and in almost the same degree this may be said of secondary institutions. Extensive libraries, museums, archives, vaults, and storehouses are not regarded as essential equipment for secondary schools, nor in fact for certain types of colleges. In these, the depository function as far as it exists at all resides in the mental activities of their faculty members; their primary, and almost exclusive, business is that of teaching—though some will interpret that word more broadly than others. Nor can research, constructive attack upon the problems of the day, and critical evaluation of society and its accomplishments be hoped for generally in the lower levels. The activities just named call for large measures of detachment, disinterestedness, and freedom. It is the rare individual who can qualify for real achievement in these directions, and not many institutions can supply the requisite facilities and atmosphere for them. But woe to that society that neglects or scoffs at them! There is an old admonition in sacred literature pertaining to a people's loss of vision. That warning is still valid.

PROBLEMS IN THE UPPER LEVELS OF EDUCATION

The most insistent practical problems in education today center about high school and college levels. They are readily traced to the influx of greatly increased numbers of students, resulting from at least three recognizable factors: the growth of our equalitarian ideals, the growth of technology, and the leveling off of our population curve. The two last-named phenomena are generally interpreted to mean fewer jobs for the younger groups of our population. In a technological world, advancement will depend upon greater amounts of schooling, but the positions open will be held more tenaciously by older individuals. This will inevitably throw greater numbers of high-school-age and junior-college-age groups toward school attendance; otherwise they threaten to become mere drifters and social burdens. Thus the duties and engrossments of strictly teaching programs in the lower schools (and, it may be added, the points of view of the leaders in that field) are affecting all colleges and universities. Approximately sixty-five per cent of the high-school-age group were in attendance in 1940. However, regarding graduates of high schools today, the American Youth Commission recently arrived at some important conclusions:

> Nearly two-fifths of all high-school graduates would be justified by their ability in going on to college, but only ap-

proximately one-half of these, or one-fifth, actually do go to college. There are some other rather interesting facts which these studies have revealed. It is our estimate that at least 15 per cent of high-school graduates went to college who lacked proper intellectual ability to succeed; and, on the other hand, we have found that at least 18 per cent should have gone and did not. To state these facts in another way, we might say that 38 per cent of our high school graduates should have gone to college; only 52 per cent of these did go. These youths who have the ability to go to college but who do not go are denied the opportunity of higher education primarily because of lack of economic resources.[9]

This raises basic questions: (1) Do the American people have sufficient vision to recognize the importance of preserving our heritage of learning? (2) Do they recognize the importance of participation of our lowest wage-groups in that heritage?[10] (3) Are they willing to face the problems of intellectual leadership and its development realistically?

The first question, put in these terms, compels belief in such vision; otherwise we surrender hope for a continuance and development of our civilization. The second, whenever we relate it to thwarted human aspiration, points toward an inexorable answer, though how long its fulfillment may require no one knows. Human life in evolution works toward the fulfillment of aspiration. In relation to the third, other educational considerations appear.

More nearly than at any time in human history we in America are approaching the realization of ''universal education.'' Had we not been an ''idealistic'' country, we could never have come so far. Every thoughtful person is concerned with seeing these ideals carried forward; their fulfillment has by no means been attained. Yet there are two facts that must be faced in this connection. First, only a portion of the national income can be spent on education, and second, the law of diminishing returns operates in education as in many other natural and social fields. The nature of some of the problems involved can be made clearer by taking for consideration two children, one a moron, the other exceptionally brilliant. It would not seem to be a point of argument that society for its own sake can afford to spend more of its income upon the second child than upon the first. Not only will the education of the two differ in degree; it will differ in kind. No one would hope by rational processes to convince a moron of the soundness of a given proposition. One might persuade him to undertake or desist from a certain course of action; but the argument would necessarily be couched in terms of pleasures and pains, rewards and punishments, never in terms of ''reasonableness.'' How far up the scale toward the brilliant individual we must go before we can safely use the ''reasonable'' approach no one knows. It is a problem in social psychology which needs serious probing, and upon the answer may hang momentous decisions in the minds of those concerned with the future of democracy. Further, the answer is always complicated by other social, psychological, and physiological factors. Even for the moron we do not know very accurately either the kind or degree of schooling society can afford. And for other individuals we know less. A tremendous amount of research in this field awaits doing, but one or two principles appear to be obvious.

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[9] Homer P. Rainey, "The Needs of American Youth for Higher Education," in *The Outlook for Higher Education,* ed. by John Dale Russell (Chicago: University of Chicago Press, 1939), pp. 64-65.

[10] "In 1935-36, 14 per cent of all families received an income of less than $500; 42 per cent received less than $1000; 65 per cent less than $1500." See *Outlook for Higher Education,* p. 56.

HUMAN VARIATION AND EDUCATION

America has ahead of her an appraisal of education in realistic terms. This involves recognition of the vast extent of human variation. It means knowing more about the individual and more about the social group. And it means coming to grips with the problem of preserving civilization. Recognizing variety, we must realize that carrying on the democratic ideal demands both individual and social fulfillment for all, but it means surrendering the silly notion that because one may be able to pay the fees asked and spend the time demanded one may in due course be qualified for any kind of exercise or task one chooses. Moreover, we must outgrow our pioneer-day distrust of the intellectual. The preservation of our heritage will call for the best brains we can produce. But dare we trust them? Not unless they are combined with a large measure of the quality we have called spiritual. Democracy does not make for a classless society except in one sense. The concept of absolute uniformity violates natural law relating to all life. Democracy postulates the integrity of individuality, and individuality implies differences. Identification of an individual means the recognition of his differences. However, all these individuals in a democratic society are classless with respect to certain basic human rights. Equality before the law, equity of opportunity, equality in the exercise of certain choices in one's outlook upon the universe—these are not subject to class distinctions. But education is not classless with respect to talent. The highest levels of education demand a class, and only nature can lay its basis. Democracy needs such a class if it is to survive. It need have no fear of it, provided that class is grounded in all democratic principles. It is time for policy commissions and educational administrative officers to speak clearly in these terms. Many of the practices of secondary schools today induce the illusion that limits do not exist. This may be good American romanticism, but it is a dangerous doctrine. Intelligent self-criticism and self-evaluation are parts of good educational processes everywhere; successful people ascertain what they can do and what they can not do. It is obvious that young students can not know this in any such definite way as older people, but at least they can be put in the way of facing the question, of realizing that somewhere and sometime they must discover both their capacities and their limitations. Outside those areas in the United States where economic conditions blight the entire educational system, it can probably be truly said that the greatest sufferer in the present public school system is the bright student, and the greater his personal charm, the greater his danger. Almost inescapably the socially successful become the mentally lazy and fail to learn the meaning of intellectual application. Stamina and drive in mental life, as elsewhere, are the result of continuously coping with things that are bitterly hard. In a democracy we need, above all, people with such intellectual stamina. Many of the economic and religious conditions in our national life that produced it in the past have all but disappeared; it would seem that education must largely fill the gap so caused.

CURRENT DEVICES

The answer to many of these difficulties appears to lie in a diversity of program and an extension of so-called general education. Three devices have already appeared attempting to cope with the situation. These are (1) the junior college, operating as a separate institution, a unit within a university, or a part of a secondary school system that has adopted the so-called ''6-4-4 plan,'' (2) the ''track'' or ''stream'' method; and (3) numerous ''goal,'' ''project,'' or ''contract'' plans. The first meets the demand of a general extension of schooling for a majority of the population. It provides for both ''terminal'' or semi-professional curricula, with distinct vocational emphases as well as those of more general academic nature. But to operate effectively for the ends advocated here it presupposes a system of grouping or individualizing of requirements, by which not only differences in talent, capacity and drive are recognized and schooling is differentiated accordingly, but the quality of instruction is capable of meeting the total range of student capacity which may be encountered.

Legitimate objection has been raised to the establishment of separate *schools* for such purposes of differentiation. In a democracy we must learn to live together with all kinds of people. But within the school itself recognition of variation must be forthcoming, while all groups and individuals remain on the same social plane. In many schools three tracks or streams are all that can be made administratively feasible, while in the very small unit recourse to variation in individual goals is undoubtedly the only sensible approach to the problem. In larger schools, a greater number of tracks, if used, will have the effect of making differences between groups less distinct. The point that must receive constant emphasis is the provision of *complete flexibility of transfer between tracks and goals.* Democracy demands achievement, but the way for that achievement must always be open.[11]

ONCE MORE, THE NATIONAL UNIVERSITY

With the greatly increased mobility of transportation and communication lately achieved, and as a result of numerous currents that run inevitably toward centralization, the idea of the national university appears as certain of realization as the national art gallery. Whether or not it will come about in the same manner remains to be seen. Fears of domination by central authority, of political manipulation and interference, of the loss of diversity of outlook can be met with only one answer: Unless a democracy can learn to run its public institutions scientifically, the democratic form of government is doomed. Democracy suffers from certain inevitable handicaps, but they can be overcome by objective and disinterested administration.

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[11] To the objection that any grouping plan is deterministic and that recent investigation throws fresh doubt upon the validity of the "intelligence" test, the answer is that a grouping plan on the basis of tests alone has never had general educational support. One is reminded of Galton's three requisites to success; namely, intellectual capacity, *together with* "zeal" and power of application. (See p. 293.) Grouping on the basis of *both* capacity and performance will show children early in life the way to achievement.

In institutions like education such a point of view is doubly essential, and it can be achieved, once we are convinced of its importance. A national university logically would form the capstone of the educational system. Of graduate level, it would serve in innumerable fields of research and training. To it none but minds that had proved their superiority would be admitted, and from it should come none but men and women actuated by the most truly scientific and disinterested ideals. Indeed, quite within the limits of reason, one might imagine here the production of a modern version of the ''philosopher-king'' of the Platonic *Republic* in a thoroughly practical manner.

THE TEACHER-TRAINING INSTITUTION

The most striking initial fact about teacher-training institutions to be dealt with is that the students in them are second-rate, as compared with those in liberal arts colleges and in most of the other professional schools—a fact that has been verified repeatedly. This means that American citizens in general are so influenced by equalitarian and economic considerations that the harm resulting either will not be faced squarely or is actually not realized. Another of the anomalies in the situation is that, in those private secondary schools to which many children of discriminating parents among the economically able are sent, the teachers are not graduates of teacher-training institutions, but of the more rigid type of academic colleges. In other words, in the professional school emphasis upon techniques rather than upon intellectual power and culture has all too often been primary.

This does not mean that thousands possessing qualities of the latter type have not been turned out. It means that the majority do not constitute such a group.[12]

Until a majority of the American population are persuaded that for their tax money they will have none but superior people in teaching positions not a great deal of improvement may be looked for. Economic and population trends may make struggle for all kinds of professional positions much more sharply competitive, in which case the situation will automatically be cleared. Otherwise, we shall need a public awakening.

Furthermore, it must be understood that what has been said applies quite as truly to the so-called lower levels of education as to the upper. With increasing knowledge of the highly formative nature of the child's early years, it may yet come about that we shall regard the kindergarten teacher as the true educational molder of the nation. To place children of any age, and most particularly the very young, under the influence of young women of unformed characters, ignorant of the graces and refinements of life, without judgment, poise, and insight, *as well as* knowledge of psychology, techniques of subject matter and rules of playground games, is a crime of heinous proportions. It is to be feared that in all ranks of the teaching profession the same offense is committed on a large scale. It would not be altogether a matter of national retrogression, should American society evolve to some sort of stable plane where business could not hold such great inducements to large proportions of American young people, and thus leave professional inducements larger by comparison.

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[12] In this connection it is interesting to note the trends in all professional schools, including the best teachers' colleges, toward insistence upon broad educational foundations preceding professional courses.

THE FINAL GOAL

One of the most striking things about Americans writing at the time of the founding of the country was their forward look. Every great leader and thinker was concerned with the establishment of institutions and the enunciation of principles which should carry far into the future. That future for him contained a great national destiny, and while men like Adams, Washington, Jefferson, and Hamilton were ''hard-headed'' men of action, they also dreamed dreams and saw visions. Today America has gone far toward fulfilling the destiny those men dreamed of. But the world has changed, and our conceptions of American destiny must be enlarged from those of national to world dimension. In this direction lie both opportunity and danger. The achievement of a true American civilization in the world of the future wherein are located a new Asia, a new South America, and a new Europe is a challenging goal. Conceivably it can eventuate in terms of economics, power, and conquest. But these are not the articles of human liberty in which American destiny was cast. Conceivably, again, the achievement may eventuate in new heights of human liberty in every field, and American civilization in the future of the world may be known as one of the great spiritual climaxes of human history. We need more such vision today, and once it is discerned, education will take on new meaning and receive fresh impetus. Confusion of thinking is most quickly overcome by a unified vision. In education it must be both lofty and concrete. But it can come only with understanding based upon knowledge of the past, awareness of present trends, and sensitiveness to enduring human values.

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EPILOGICAL—TO THE YOUNG TEACHER

So they fought knowing that they themselves had no hope. This is the very heart of courage, transcending all other acts of which men are capable, and the surest proof that man is more than his flesh, his blood, his bones, and his appetites. On this proof, as on a rock, that there is in all men a capacity to live and a willingness to die for things which they themselves can never hope to enjoy, there rests the whole of man's dignity, and the title to all his rights. Were man not the kind of creature who can pursue more than his own happiness, he would never have imagined his freedom, much less have sought it.

This quotation from Walter Lippmann's column upon the fall of Bataan deals with human goals. Both men and animals have scales of values; they pursue objectives perceived as worth striving for. But that which is "worth" effort and toil and jeopardy of life to one man or one creature is not always so worth to another. The contented bovine lying in the pasture with half-closed eyes would hardly be roused by a pile of gold pieces in the vicinity. Of men we like to say that they appraise and choose their objectives because they think, but this we know to be gross exaggeration. Some seem never to surmount the plane of feeling and bias; and even the most intelligent are greatly swayed by unreasoned desires.

The great variability in men's ideals, in what they regard worth while, is a commonplace, and teachers in a modern world of conflict, to the degree that they deserve the name of teachers, not only must scrutinize critically their own standards; they must bring intelligence to bear upon all human values. In this contemporary scene there are two imminent difficulties in the way. First, certain pressures in American society induce in teachers today a kind of neutrality. Teachers are not expected to have positiveness; and they can easily become drab creatures. Second, we live in a world where material ''things'' exist in greater abundance than at any time in man's history. Such a situation carries within it tremendous potentialities for the ultimate release of man's mental or ''spiritual'' qualities, but it carries also the threat of overwhelming him.

How in the face of these difficulties can the teacher hope to construct an adequate scale of values? The first condition is that he will bring to bear upon it a considerable power of thought. He may not be able to thrust aside certain complexes within his personality, but at least he will endeavor to identify them, scrutinize them, and appraise them. Then he will devote himself happily to a life of study. Not every teacher is a scholar, but every teacher of long-standing success is a student. Study and contemplation beget judgment, and judgment brings respect in a world of values. The second condition—that he become an informed person—grows out of the first. In the judgment of the present writers some of the important basic grounds of educational philosophy have been sketched in this volume. Now the young reader must consciously go about raising his own standards, setting up his own gauges. In this process, however, let him give weight to those values with promise of permanence. He cannot subscribe to every social or intellectual fashion of his time. There will be situations in which he functions as conservator; in others, as innovator. He may risk ostracism on either tack. Therefore, he must have deep and abiding conviction that he sees relationships in bigger totals than are customarily reckoned with, and that man's true humanity inheres in a transcendence above ''his flesh, his blood, his bones, and his appetites.'' To see these goals steadily and to transmit their meaning to succeeding generations has been the high mission of teaching since teaching began.

A philosophy of education is, necessarily, first cousin to a philosophy of life. Every teacher to the degree that he is professionally adequate will work slowly, systematically and patiently toward clear definition of a scale of values within a comprehensive philosophy of education.

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